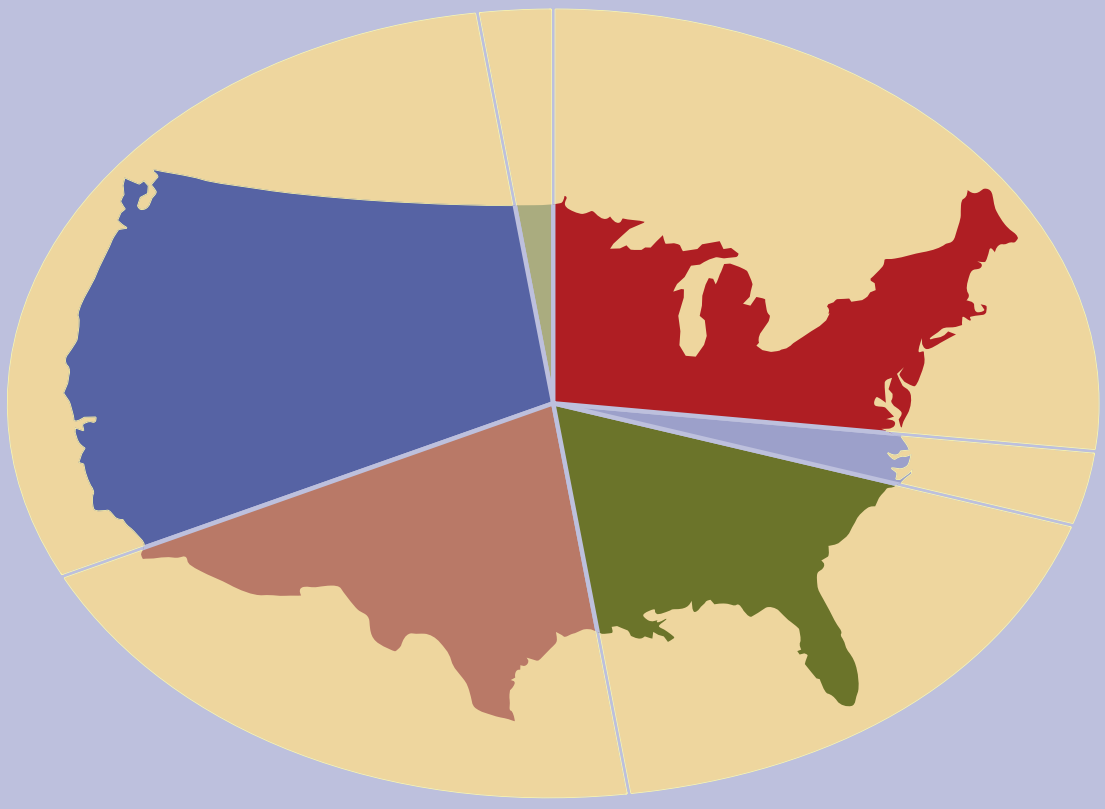
2010 National Profile of LOCAL HEALTH DEPARTMENTS



NACCHO
National Association of County & City Health Officials
The National Connection for Local Public Health

NACCHO
National Association of County & City Health Officials
The National Connection for Local Public Health

1100 17th Street, NW
7th Floor
Washington, DC 20036
P 202-783-5550
F 202-783-1583
http://www.naccho.org

About NACCHO

NACCHO is the national organization representing local health departments. NACCHO supports efforts that protect and improve the health of all people and all communities by promoting national policy, developing resources and programs, seeking health equity, and supporting effective local public health practice and systems.

Funding for this project was provided by the Centers for Disease Control and Prevention (under cooperative agreement U38/HM000449-03) and the Robert Wood Johnson Foundation® in Princeton, New Jersey. The contents of this document are solely the responsibility of NACCHO and do not necessarily represent the official views of the sponsors.

2010 National Profile of LOCAL HEALTH DEPARTMENTS

August 2011

NACCHO
National Association of County & City Health Officials
The National Connection for Local Public Health

Acknowledgments

2010 National Profile of Local Health Departments

Reba Novich, MSW

The 2010 National Profile of Local Health Departments study was, as in past years, a broad-based collaborative effort with contributions made by a diverse set of stakeholders.

The top executives and staff of the nation's local health departments (LHDs) who completed the Profile questionnaires were critical partners; their commitment to local public health continues to be the foundation for the Profile study.

The members of the Profile Workgroup are a dedicated group of public health professionals. These researchers and practitioners provided essential advice and assistance throughout the design, fielding, and analysis phases of the survey.

Many public health leaders around the country, particularly representatives of state associations of local health officials and state health agencies, encouraged LHD top agency executives to complete the questionnaire. As champions of the Profile study, they made an important contribution to the 2010 Profile study's high response rate.

Alex Babin of PCE Systems developed the Web-based interface for the Profile questionnaire and provided technical support. Phyllis Jask did copyediting and Mary Argodale handled graphic design for this report.

Many NACCHO staff contributed to the Profile study as questionnaire content advisors, study advocates, and report reviewers. Carolyn Leep was a source of remarkable knowledge and support in both administrative and analytic matters. Profile team members, past and present, were Vivian Levy, Nathalie Robin, Gulzar Shah, and Samuel Yu. The support of the Centers for Disease Control and Prevention and the Robert Wood Johnson Foundation made the Profile study possible. Their support and guidance is gratefully acknowledged.

Message from the NACCHO President and Executive Director

On behalf of the National Association of County and City Health Officials (NACCHO), we are pleased to present the results of the 2010 National Profile of Local Health Departments study (Profile).

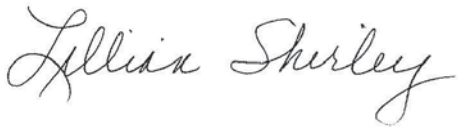
The Profile presents the most up-to-date and complete information about the people, resources, and work of local health departments in the United States. It supports the activities of those in the fields of public health practice, research, education, policy development, and advocacy whose collective activities protect and improve the health of all people and all communities.

The first Profile was released in 1989. The current Profile is the sixth in a series released consecutively over almost a quarter of a century. With each release, NACCHO has worked in an increasingly coordinated manner on definitional issues, question wording, data harmonization, and timing of survey administration with the Association of State and Territorial Health Officials and the National Association of Local Boards of Health. The goal of this coordination has been to produce more comparable data and a more complete view of the governmental public health system as a whole. NACCHO anticipates that this data harmonization process will continue.

The Profile is made possible by the continued and generous support of the Centers for Disease Control and Prevention and the Robert Wood Johnson Foundation for which we are thankful. We also wish to thank the executives and staff of local health departments across the country whose participation creates the data set for the Profile. We also acknowledge and are thankful for the contributions of many others whose time, energy, and thoughtful suggestions assured the success of the Profile. From across the country, these include NACCHO workgroup members and staff, representatives from state health departments and state associations of county and city health officials, and other leaders in local public health practice.

We welcome your comments and also your continued interest in and use of these data. Visit us online at www.naccho.org/profile or email us at profile@naccho.org.

Sincerely,



Lillian M. Shirley, BSN, MPH, MPA
NACCHO President (2011–2012)
Multnomah County (OR)
Health Department

Robert M. Pestronk, MPH
Executive Director
NACCHO

Robert Wood Johnson Foundation

June 2011

Dear Colleague:

We are pleased to again release the 2010 National Profile of Local Health Departments in partnership with the National Association of County and City Health Officials (NACCHO). We hope this report informs your understanding about how health departments across the country continue to improve, make staying healthy less costly, and improve the quality of life for all Americans.

The Robert Wood Johnson Foundation is committed to strengthening our public health system. We appreciate the challenges and choices that health departments of all types and sizes are facing – at the same time as there is even greater demand for services. In addition to illuminating the state of the local public health workforce and fiscal climate, the Profile guides research and innovation that is uncovering the evidence that public health officials and policy makers need to use scarce resources wisely to protect and promote health.

Currently, the University of Kentucky's National Coordinating Center for Public Health Services and Systems Research is managing the harmonization of NACCHO profile data with that of the Association of State and Territorial Health Officials and the National Association of Local Boards of Health. This will provide integrated evidence across the local and state governmental health system that can identify best practices to organize, manage, finance and structure public health systems and services. In addition, the inclusion of data on how many local health departments plan to submit applications to the Public Health Accreditation Board – a shared investment of RWJF and the Centers for Disease Control and Prevention – makes the NACCHO profile a critical ally in our efforts to help public health departments identify effective and efficient solutions to health problems in their communities.

I would like to thank the many dedicated local health department staff who participated in this survey and the staff at NACCHO who managed the planning, execution, and analysis reflected here. The Profile represents the most comprehensive and timely picture of what is happening in local health departments, and the exceptional 82 percent response rate makes clear your commitment to continuous improvement. If we're going to solve America's health crisis, we need to make smart investments in public health. This report is an important step forward, and we, and the public health leaders who depend on this information source, are tremendously grateful.

Risa Lavizzo-Mourey, M.D., M.B.A.
President and CEO
Robert Wood Johnson Foundation

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Centers for Disease Control
and Prevention (CDC)
Atlanta GA 30333

June 7, 2011

Dear Colleagues:

The Centers for Disease Control and Prevention (CDC) is pleased to support the National Association of County and City Health Officials (NACCHO) and its work to produce the annual *National Profile of Local Health Departments*. This Profile is an invaluable resource for all public health professionals, policymakers, federal agencies, researchers, and others to understand the current infrastructure, practice, and capacity of local public health practice.

The work of local health departments is critical to protecting the health of the community. This Profile highlights this work and includes benchmarks that inform public health policy; supports public health practice and research across health departments; and increases awareness of public health work on the local level.

Today's economic challenges require that we make the best use of scarce resources. Sharing information, practices, successes, and lessons learned, and collaborating on services provided are ways we can strengthen public health in cost-efficient and cost-saving ways. We must learn to leverage the resources we have and focus on the areas where we can make the biggest difference.

The philosophy is simple: identify problems you can do something about, develop programs, and check them rigorously. The more we know, the more we can do successfully. This report helps us do that. We can make an impact, demonstrate that impact, and share what we have learned to serve as a model for further use.

This Profile is one of the foremost resources on local public health systems—their practices, policies, and infrastructure. I would like to commend NACCHO and the local health departments who provided these data, and their dedication and contributions to public health. CDC looks forward to seeing the data used to take action to save lives, save money, and protect health.

Sincerely,

Thomas R. Frieden, M.D., M.P.H.
Director, CDC, and
Administrator, Agency for Toxic
Substances and Disease Registry

2010 National Profile of Local Health Departments Workgroup

NACCHO Representatives

Joan Ellison, RN, MPH
Livingston County (NY) Department of Health

Steven Gold, MPH
Macomb County (MI) Health Department

Lea Morgan, MPH
San Bernardino County (CA) Department of Public Health

Lisa VanRaemdonck, MSW, MPH
The Colorado Association of Local Public Health Officials

Academic Advisors

Kristine Gebbie, DrPH, RN
School of Nursing
Hunter College

Glen Mays, PhD, MPH
Fay W. Boozman College of Public Health
University of Arkansas for Medical Sciences

Bernard Turnock MD, MPH
Center for Public Health Practice
University of Illinois at Chicago
School of Public Health

Partner Organization Representatives

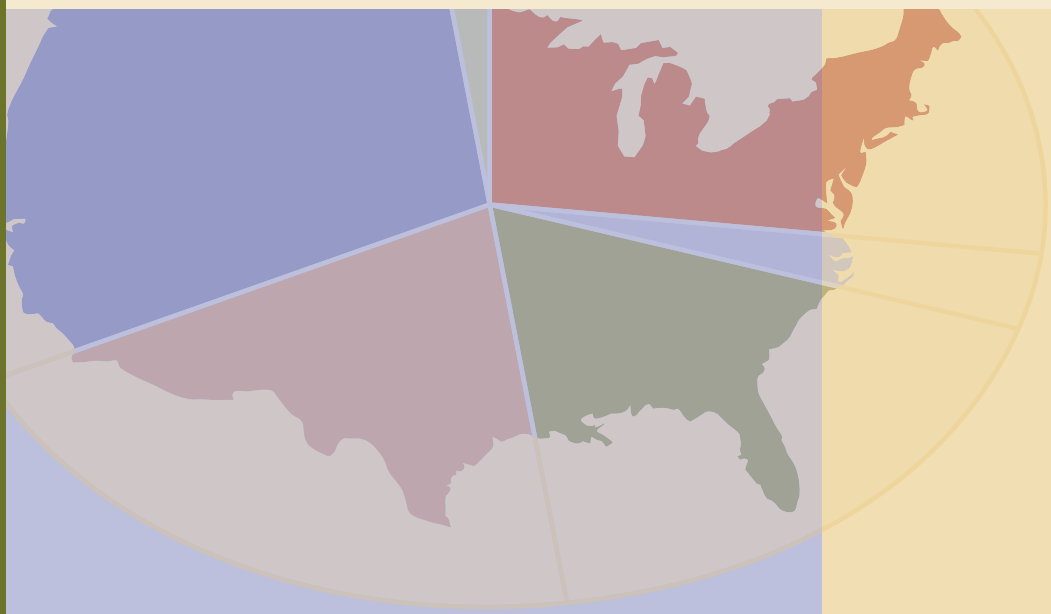
Timothy W. Van Wave, DrPH
Office for State, Tribal, Local, and Territorial Support
Centers for Disease Control and Prevention

Ginger Fenton PhD, MS, CP-FS
National Association of Local Boards of Health

Jeff Jones, PhD
University of Kentucky

Katie Sellers, DrPH
Association of State and Territorial Health Officials

Table of Contents



List of Figures

Chapter 1: Introduction

Chapter 2: Overview of LHDs: Jurisdiction and Governance

Chapter 3: Financing

Chapter 4: LHD Leaders

Chapter 5: LHD Workforce

Chapter 6: Emergency Preparedness

Chapter 7: LHD Activities

Chapter 8: Community Health Assessment and Quality Improvement

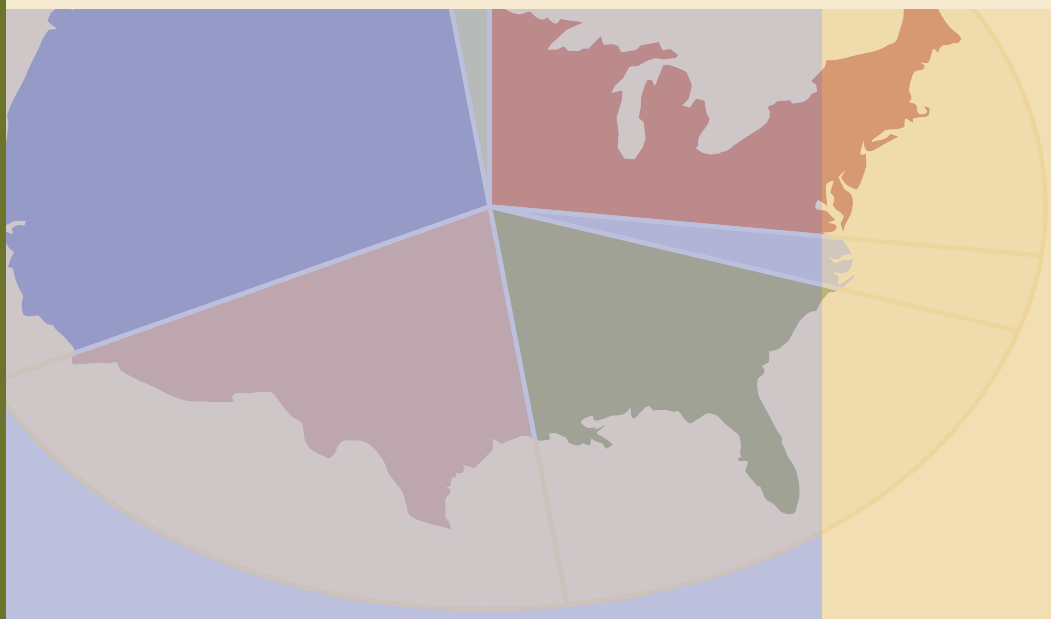
Chapter 9: Policy and Advocacy

Chapter 10: Information Technology

CHAPTER 1

Introduction

- Background
- Previous Profile Studies
- The 2010 National Profile of Local Health Departments Study



Background

The study of local public health infrastructure and practice in the United States can be traced to 1850, when Lemuel Shattuck, who has been called the original architect of the governmental public health infrastructure, wrote *Report of the Sanitary Commission of Massachusetts*.[1] Although the report was ignored for some time, by the late nineteenth century it was influencing the development of state and local public health activities. In the United States, state and local governments were quite varied in structure, size of population served, and historic development; the local public health system reflected this variety in different governance structures and statutory frameworks. By the turn of the twentieth century, there were health departments in most states and many large cities. County-based local health departments (LHDs) began to appear in 1911.

In 1914, the American Medical Association's Council of Health and Public Instruction commissioned Charles Chapin to conduct a survey of the public health activities in state health departments. By 1923, the American Public Health Association's Committee on Administrative Practice (CAP) collected data from 83 city health departments. The committee continued to operate during the next 20 years, developing appraisal forms used to collect information on public health practices and to provide feedback to health officers. In 1943, CAP published *Health Practice Indices*, containing data on 178 LHDs in 31 states and four Canadian provinces.[2]

A different approach was taken in 1945 by Haven Emerson, MD, chairman of CAP, when he released *Local Health Units for the Nation,* in which he both described the current system and advocated for an ideal local health system. His theory was that local health systems could be most effectively organized to serve no fewer than 50,000 people, and he estimated the total number of local units (at that time, 1,197) that would be required to create this ideal system. The report also identified six core public health activities that were to constitute the minimum services expected from the local units: vital statistics, sanitation, communicable disease control, maternal and child health, health education, and laboratory services.

The next study of local public health systems, published in 1949,[3] focused on the medical care activities of full-time LHDs. Milton Terris, MD, and Nathan Kramer identified 1,385 LHDs in the United States, and canvassed them through a questionnaire. They documented a shift from purely preventive services to therapeutic and diagnostic services, with a smaller group of LHDs reporting general medical care programs. In addition to this information about LHD activities, they also reported on working relationships between hospitals and LHDs and a trend at that time toward joint housing of hospitals and LHDs.

Although LHDs continued to grow in the 1950s, interest in studying local public health diminished, and CAP was disbanded. In the 1960s, the Public Health

Service conducted two studies on the medical activities provided by LHDs. The 1970s saw the emergence of work by C. Arden Miller, whose research during four decades began with a 1977 survey of LHDs and their directors. Miller's body of work includes summary data concerning jurisdictions, organization, finance, functions, and staffing of LHDs, along with local health officers' training and salaries. Miller also led the field by recognizing that LHDs often served a unique role as the governmental presence in health and shaped an understanding of the important role played by LHDs in their communities.

Previous Profile Studies

The role of community health planning was formative in developing NACCHO's National Profile of Local Health Departments study. The first of these studies, conducted in 1989–1990, was born out of an effort to collect information related to the Assessment Protocol for Excellence in Public Health (APEX-PH). The first Profile study was quite timely in the broader history of public health. Shortly after the landmark 1988 Institute of Medicine (IOM) Report was published, the Profile was, however unintentionally, responsive to the IOM's wake-up call to the public health community, which included the comment "data on the activities of local health departments are hard to come by."

The first Profile study began by addressing a problem that had plagued all previous studies of local public health systems: defining an LHD. For the purposes of the first and all subsequent Profile studies, an LHD has been defined as the following:

> An administrative or service unit of local or state government, concerned with health, and carrying some responsibility for the health of a jurisdiction smaller than the state.

Including the 2010 study, NACCHO has conducted six National Profile of Local Health Departments studies—1989–1990, 1992–1993, 1996–1997, 2005, and 2008—with response rates ranging from 72 percent (1992–1993 study) to 88 percent (1996–1997 study). All Profile studies have been funded by the Centers for Disease Control and Prevention (CDC), and beginning in 2007, funding was also received from the Robert Wood Johnson Foundation (RWJF). In addition, NACCHO conducted the 1999 Local Public Health Agency Infrastructure study, a large sample survey with topics similar to the Profile study and funded by RWJF.

In many ways, all Profile studies have contained themes similar to the earlier local public health infrastructure studies described above: a close look at the funding, staffing, governance, and activities of LHDs and an emphasis on understanding how these patterns vary across the country and by size of the population served by the LHD. In some ways, the more recent Profile studies reflect emerging developments in history and local public health, with data gathering in areas such as emergency preparedness and accreditation.

The 2010 National Profile of Local Health Departments Study

FIGURE 1.1 | Essential Public Health Services

1	Monitor health status to identify and solve community health problems.
2	Diagnose and investigate health problems and health hazards in the community.
3	Inform, educate, and empower people about health issues.
4	Mobilize community partnerships and action to identify and solve health problems.
5	Develop policies and plans that support individual and community health efforts.
6	Enforce laws and regulations that protect health and ensure safety.
7	Link people to needed personal health services and assure the provision of healthcare when otherwise unavailable.
8	Assure competent public and personal healthcare workforce.
9	Evaluate effectiveness, accessibility, and quality of personal and population-based health services.
10	Research for new insights and innovative solutions to health problems.

Purpose

The purpose of the 2010 National Profile of Local Health Departments study (Profile study) was to advance and support the development of a database for LHDs to describe and understand their structure, function, and capacities. With increased knowledge and awareness of LHD infrastructure, practice, and capacity, both research and local public health advocacy efforts would be enhanced by developing evidence-based practices related to LHD capacity and infrastructure and changing policy, practice, structure, and funding at the systemic level. With a strengthened LHD capacity to deliver the 10 essential public health services (Figure 1.1), an overall improvement in population-based health outcomes would be seen.

Methodology

The 2010 Profile questionnaire was piloted in June and July 2010. The final questionnaire was fielded on September 7, 2010, through an e-mail sent to the top agency executive (or, in some cases, a designated alternate) of every LHD in the study population. The e-mail included a link to a Web-based questionnaire, individualized with preloaded identifying information specific to the LHD. The fielding phase of the study closed on November 24, 2010. Paper copies of the questionnaire were available upon request. Extensive efforts to encourage participants to complete the questionnaire included follow-up with non-respondents by NACCHO staff and a nationwide group of Profile study advocates, coupled with technical support offered through an e-mail address and telephone hotline.

Questionnaire Design

The 2010 Profile study questionnaire included a set of core questions (Core) sent to all LHDs in the United States; additional supplemental questions were grouped into two modules. LHDs were randomly assigned to receive only the Core or the Core plus one of the two modules. No LHD received two modules. Topics contained in each section of the questionnaire are shown in Figure 1.2. Many questions in the Core have been used in previous Profile studies and provide an ongoing data set for comparative analysis. The Core also included economic surveillance questions about budget, staffing, and program cuts that occurred during the first half of 2010. Most new items were placed in modules. The Profile workgroup was extensively involved in developing the 2010 questionnaire.

Study Population

To identify the study population for the 2010 Profile study, NACCHO began with the same definition for an LHD—an administrative or service unit of local or state government, concerned with health, and carrying some responsibility for the health of a jurisdiction smaller than the state—used in every Profile study. NACCHO's database of LHDs results from the 2008 Profile study, and consultations with state health agencies and state associations of local health officials were used to develop the final count of 2,565 LHDs as the 2010 Profile study population. Hawaii and Rhode Island were excluded from the study because these state health departments operate on behalf of local public health and have no sub-state units. A detailed chart of the study population of LHDs in each state and the number completing the questionnaire is shown in Figure 1.3.

FIGURE 1.2 | Questionnaire Topics

Core	Governance
	Funding
	LHD Top Executive
	Workforce
	Activities
	Community Health Assessment & Planning
	Communication Among LHD Leaders
Module 1	Quality Improvement
	Accreditation Preparation
	Inter-LHD Resource Sharing
	Emergency Preparedness
	Information Technology
Module 2	Human Resources Issues
	Guide to Community Preventive Services
	Policymaking and Advocacy
	Access to Healthcare Services
	Practice-Based Research
	Health Impact Assessments
	Public Health & the Law
	Public Health Reports
	Evaluation of Profile

Response Rates

Figure 1.3 also shows the response rate overall and by state. Overall, the study had a response rate of 82 percent, or 2,107 of 2,565 LHDs. With one exception—Massachusetts—all states had a response rate of more than 60 percent. Massachusetts, with a response rate of 41 percent, actually had the highest number of respondents (136) due to the unique structure of its local public health system. A total of 14 states and Washington, DC, had response rates of 100 percent (see map, Figure 1.4).

Response rates by the size of the population served by the LHD are shown in Figure 1.5. The lowest response rate (73%) was among LHDs serving populations less than 25,000; the highest were among LHDs serving large populations (96% response among LHDs serving populations between 500,000 and 999,999; 95% for LHDs serving populations of one million or more). Because there are fewer jurisdictions with large populations (and fewer corresponding LHDs), the higher response rates in these groups are important to the analytic capacity of the study data.

FIGURE 1.3 | Total Number of LHDs in Study Population, Number of LHDs Completing Questionnaire, and Response Rates, for all LHDs and by State

State	Total Number of LHDs	Number of Respondents	Response Rate
ALL	2,565	2,107	82%
Alabama	67	67	100%
Alaska	8	5	63%
Arizona	15	15	100%
Arkansas	75	75	100%
California	61	44	72%
Colorado	54	50	93%
Connecticut	77	61	79%
Delaware	2	2	100%
District of Columbia	1	1	100%
Florida	67	66	99%
Georgia	18	16	89%
Idaho	7	7	100%
Illiniois	96	92	96%
Indiana	93	65	70%
Iowa	101	77	76%
Kansas	100	86	86%
Kentucky	57	48	84%
Louisiana	11	9	82%
Maine	10	10	100%
Maryland	24	24	100%
Massachusetts	330	136	41%
Michigan	45	42	93%
Minnesota	76	69	91%
Mississippi	9	8	89%
Missouri	114	97	85%
Montana	50	39	78%
Nebraska	21	21	100%
Nevada	4	4	100%
New Hampshire	5	4	80%
New Jersey	106	97	92%
New Mexico	5	5	100%
New York	58	48	83%
North Carolina	85	79	93%
North Dakota	28	26	93%
Ohio	127	103	81%
Oklahoma	70	63	90%
Oregon	34	33	97%
Pennsylvania	16	14	88%
South Carolina	8	8	100%
South Dakota	8	8	100%
Tennessee	95	94	99%
Texas	69	49	71%
Utah	12	10	83%
Vermont	12	12	100%
Virginia	35	35	100%
Washington	35	33	94%
West Virginia	49	41	84%
Wisconsin	92	90	98%
Wyoming	23	19	83%

FIGURE 1.4 | Response Rates, by State (Map)

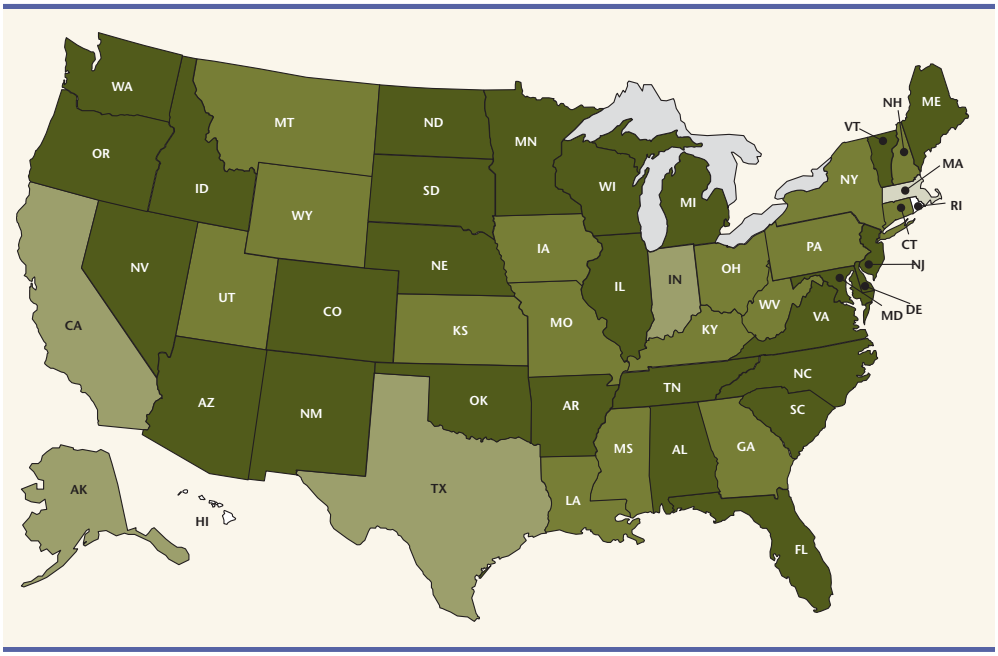


FIGURE 1.5 | Response Rate, Total Number of LHDs in the Study Population, and Number of LHDs Completing Questionnaire, by Size of Population Served

Size of Population Served	Response Rate	Total LHDs	LHDs Completing Questionnaire
<25,000	73%	1,067	784
25,000–49,999	85%	535	455
50,000–99,999	85%	382	324
100,000–249,999	94%	318	300
250,000–499,999	90%	130	117
500,000–999,999	96%	92	88
1,000,000+	95%	41	39
Total	82%	2,565	2,107

Sampling

Every LHD in the study population received Core. One of the two sets of supplemental questions or modules was included in the questionnaire for randomly selected LHDs. Stratified random sampling (without replacement) was used to assign LHDs to receive Core only or Core plus one of the two modules, with strata defined by the population size of the jurisdiction served by the LHD. In Figure 1.6, the number of LHDs assigned to receive Core or Core plus one of the two modules is shown.

Response rates for the Profile study Core and Core plus one of the additional modules are shown in Figure 1.7. All versions of the questionnaire (Core only or Core plus one module) achieved a response rate of 81 percent or more.

FIGURE 1.6 | Number of LHDs Included in Module Samples, by Size of Population Served

Size of Population Served	Core Only	Core + Module 1	Core + Module 2
<25,000	647	210	210
25,000–49,999	296	119	120
50,000–99,999	194	94	94
100,000–249,999	152	83	83
250,000–499,999	26	52	52
500,000–999,999	0	46	46
1,000,000+	1	20	20
Total	1,316	624	625

FIGURE 1.7 | Response Rate for Core Questionnaire and Additional Modules

Instrument	Response Rate
Core Questionnaire Only	81%
Core and Module 1	85%
Core and Module 2	83%

Survey Weights and National Estimates

Unless otherwise stated, national statistics presented in this report were computed using appropriate estimation weights. Estimation weights for the items from the core questionnaire (sent to all LHDs) were developed to account for dissimilar non-response by size of population served. Because module questions were administered only to a sample of LHDs, the estimation weights used to produce statistics from modules also accounted for sampling. By using estimation weights, the Profile study provides national estimates for all LHDs in the United States. Any 2008 statistics included in this report were also weighted for non-response. The occupation-specific estimates of the LHD workforce were developed by using special statistical weights to account for both survey non-responses and item non-responses for the number of full-time equivalent (FTE) employees in each occupation category. Refer to Chapter 5 for more details.

Rounding

Due to rounding, numbers in pie charts may not always add to exactly 100 percent. Similarly, reported sums of two or more numbers presented in a figure may not add to the sum of the value labels because of rounding. In all cases, numbers are added first and then the sum is rounded.

Notes

1 Turnock, B. J. and Barnes, P. A. (2007). History will be kind. *Journal Public Health Management and Practice*, 13(4), 337–341.

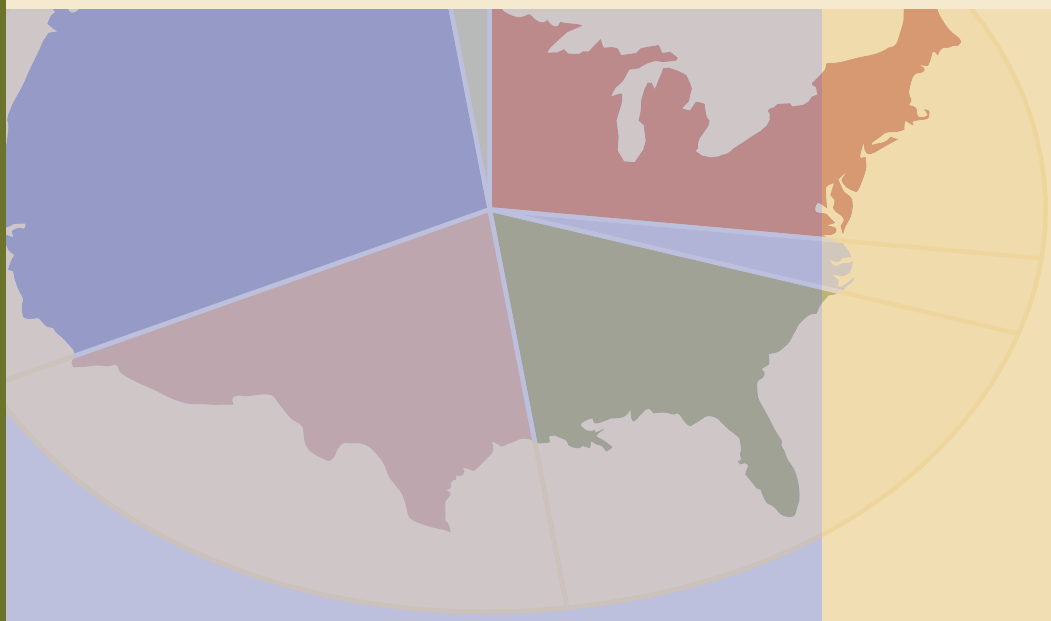
2 NACCHO. (1990). *The National Profile of Local Health Departments*. Washington, DC: NACCHO.

3 Milton, T. and Kramer, N. (1949). Medical care activities of full-time health departments. *American Journal of Public Health*, 39(9), 1129–1135.

CHAPTER 2

Overview of LHDs: Jurisdiction and Governance

- What Size Populations Did LHDs Serve?
- What Types of Jurisdictions Did LHDs Serve in the United States?
- What Level of Government Had Authority over LHDs?
- How Many LHDs Had a Local Board of Health?
- What States Had Local Boards of Health?
- What Did Local Boards of Health Do?



FAST FACTS

68 percent of LHDs served a county or combined city-county jurisdiction.

63 percent of LHDs served small jurisdictions (populations of less than 50,000), but these small jurisdictions account for only 11 percent of the U.S. population.

Approximately 5 percent of LHDs serve 49 percent of the U.S. population.

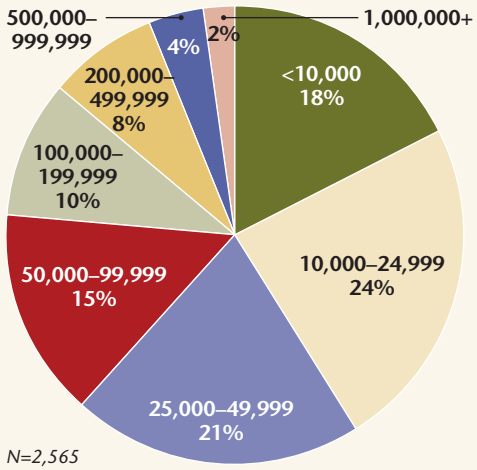
75 percent of LHDs served a jurisdiction with a local board of health.

In 27 states, all LHDs operated as units of local government.

Background

Chapter 2 begins with an analysis of the population sizes served by LHDs. These findings are based on Profile study findings and additional secondary data regarding respondent and non-respondent LHD size of population served, and thus include all 2,565 LHDs in the study population. The population data used for these analyses are based on estimated population figures of the U.S. Bureau of the Census 2008. Additionally, information presented here regarding LHD governance builds on work performed by the Association of State and Territorial Health Officials (ASTHO) and the National Opinion Research Center (NORC), in conjunction with NACCHO, to classify the governance relationships that state health departments have with LHDs. For additional information about ASTHO's classification system, visit http://www.astho.org/research/data-and-analysis/. All other national data shown in the chapter (and in the rest of the report) are taken from the 2010 Profile study questionnaires and are weighted to represent all LHDs.

FIGURE 2.1 | Percentage Distribution of LHDs, by Size of Population Served



N=2,565

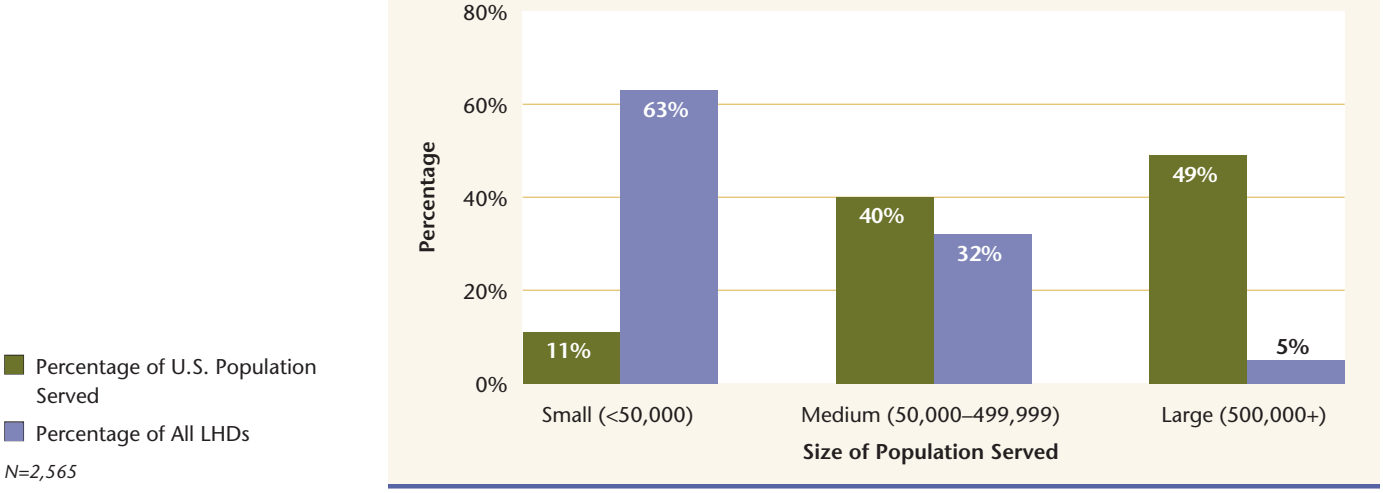
Note: Due to rounding, percentages do not add to 100%.

What Size Populations Did LHDs Serve?

Among the 2,565 total LHDs in the United States, the largest numbers of LHDs served jurisdictions with small populations. About 63 percent served populations less than 50,000 persons (Figure 2.1). Another 15 percent served populations from 50,000 to 99,999, and 18 percent served populations from 100,000 to 499,999. Six percent served populations of 500,000 or more.

Figure 2.2 shows both the percent of all LHDs by population category and the percent of the U.S. population served. About 5 percent of all LHDs covered 49 percent of the U.S. population; whereas 32 percent of all LHDs covered 40 percent of the U.S. population and 63 percent covered 11 percent of the U.S. population.

FIGURE 2.2 | Percentage of LHDs and Percentage of U.S. Population Served, by Size of Population Served



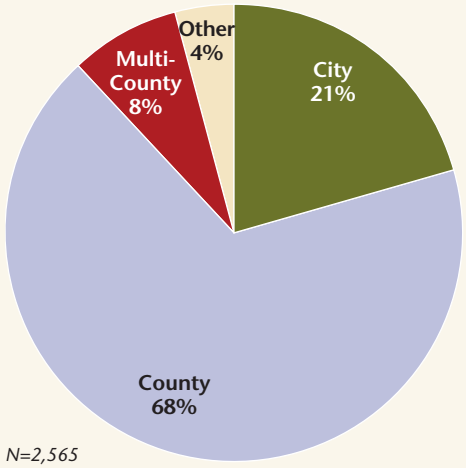
N=2,565

What Types of Jurisdictions Did LHDs Serve in the United States?

For the 2010 Profile study, each LHD was classified by type of jurisdiction based on the geographic boundaries covered by its jurisdiction. This differed from the 2008 Profile study when LHDs self-reported their type of jurisdiction.

As Figure 2.3 shows, in 2010 most LHDs in the United States (68%) were county based. An additional 21 percent served city or town jurisdictions; whereas 8 percent served multiple county jurisdictions. The "other" category includes LHDs organized to serve multiple cities (3.5%) and LHDs that serve both a county and a city that does not lie within the county boundaries (0.2%).

FIGURE 2.3 | Percentage Distribution of LHDs, by Type of Geographic Jurisdiction



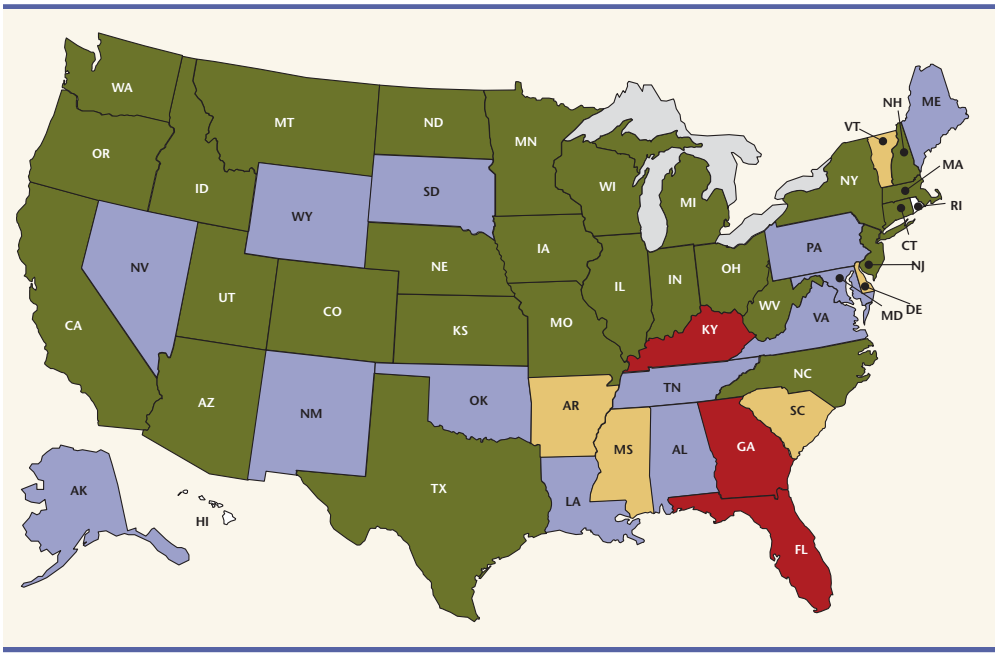
N=2,565

Note: Due to rounding, percentages do not add to 100%.

What Level of Government Had Authority over LHDs?

LHDs can be governed by local authorities (e.g., local board of health, county or city elected officials) or by the state health agency, or both. Figure 2.4 shows a simplified governance categorization scheme for LHDs. If all LHDs in a state were governed by local authorities, the state was categorized as local governance. If all LHDs in a state were governed by the state health agency, the state was characterized as state governance. If LHD governance is shared between local and state authorities, the state was characterized as shared governance. If governance differed among LHDs within a state (e.g., some were governed by a state authority and others were governed by a local authority), the state was categorized as mixed governance. LHDs in 27 states had local governance, five states and Washington, DC, had state governance, three states had shared governance, and 13 had mixed governance.

FIGURE 2.4 | LHD Governance Type, by State (Map)



Governance Type

- Local
- Mixed
- Shared
- State
- Non-Participants: Hawaii, Rhode Island

Local = All LHDs in the state are units of local government

State = All LHDs in the state are units of state government

Shared = All LHDs in the state are governed by both state and local authorities

Mixed = LHDs in state have more than one governance type

FIGURE 2.5 | Percentage of LHDs with a Local Board of Health, by Size of Population Served

Size of Population Served	Percentage with Local Board of Health
All LHDs	*75%*
<10,000	79%
10,000–24,999	75%
25,000–49,999	84%
50,000–74,999	80%
75,000–99,999	77%
100,000–199,999	73%
200,000–499,999	59%
500,000–999,999	64%
1,000,000+	33%

n=2,099

How Many LHDs Had a Local Board of Health?

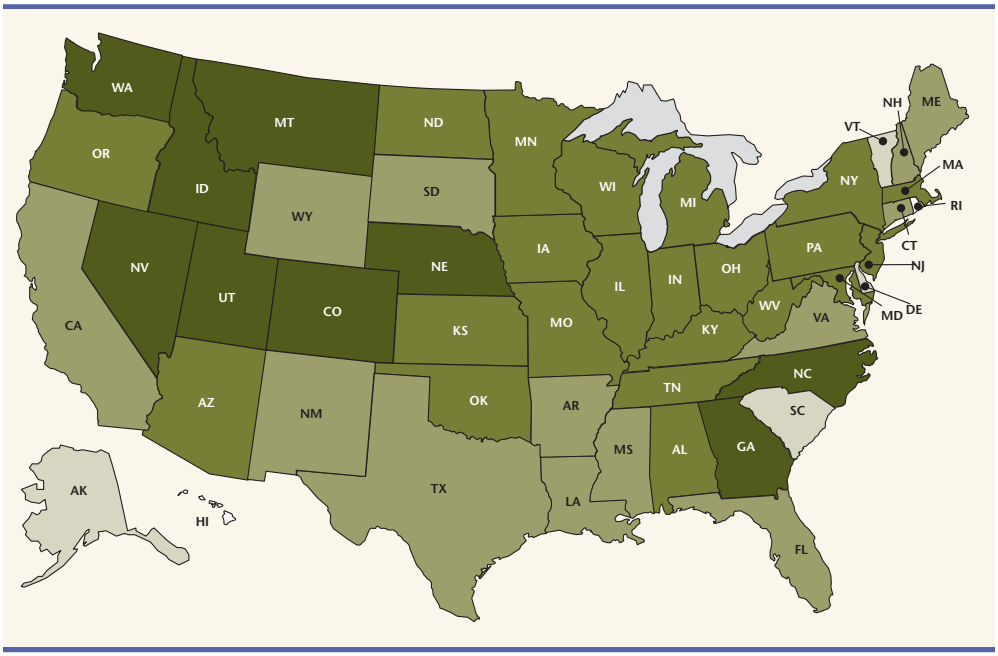
About 75 percent of all LHDs had an associated local board of health (Figure 2.5); 72 percent had one local board of health; and 3 percent had more than one local board of health. In general, the frequency of local boards of health decreased with increasing jurisdictional size; from 79 percent of LHDs serving a population of less than 10,000 to 33 percent of LHDs serving more than one million.

What States Had Local Boards of Health?

For the 2010 Profile, LHDs reported whether they had one or more local boards of health or none. In nine states, all LHDs reported having an associated local board of health; in another 22 states, 50–99 percent of the LHDs had an associated local board of health; and in another 13 states, 1–49 percent had an associated local board of health (Figure 2.6). Four states and Washington, DC, reported having no local boards of health.

In some cases these local boards of health may not meet the definition of local boards of health used by the National Association of Local Boards of Health (NALBOH). Therefore, the percentage of LHDs with local boards of health by state as presented in Figure 2.6 may differ from the percentages reported by NALBOH.

FIGURE 2.6 | Percentage of LHDs with a Local Board of Health, by State (Map)



What Did Local Boards of Health Do?

Local boards of health served many functions: adopting public health regulations, setting and imposing fees, approving the LHD budget, hiring and firing the top agency executive, and requesting a public health levy. Figure 2.7 shows the percentage of local boards of health with specific functions performed. Advising LHD or elected officials on policies, programs, and budgets (87%), setting policies, goals, and priorities that guide the LHD (81%), adopting public health regulations (79%), and approving the LHD budget (74%) were the four most common functions.

FIGURE 2.7 | Percentage of LHDs with Select Local Board of Health Functions*

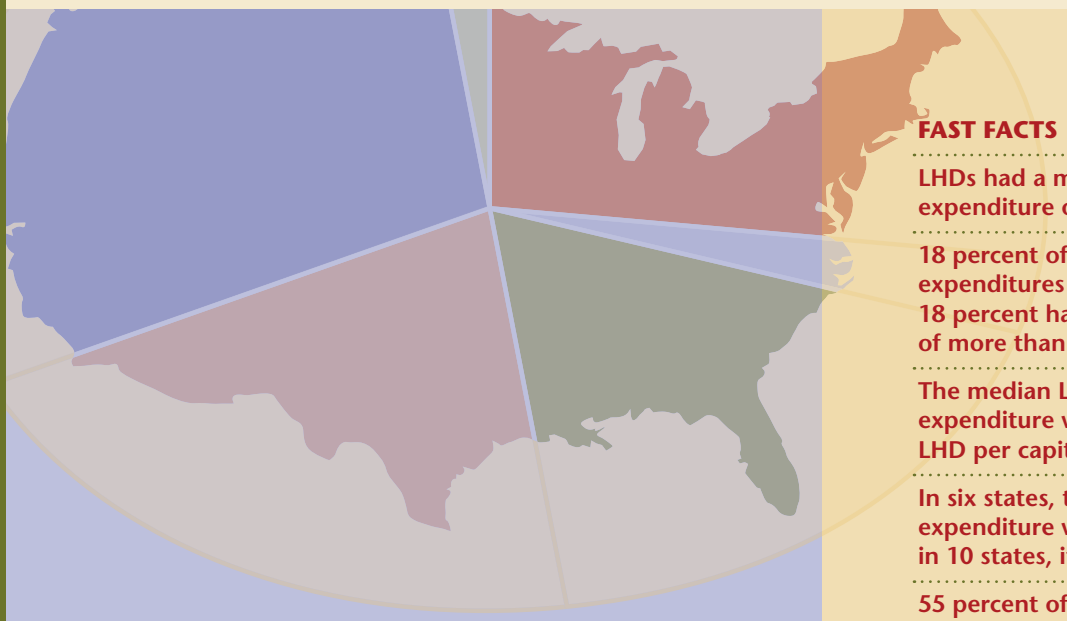
Functions Performed	Percentage of LHDs
Advise LHD or Elected Officials on Policies, Programs, and Budgets	87%
Set Policies, Goals, and Priorities that Guide the LHD	81%
Adopt Public Health Regulations	79%
Approve LHD Budget	74%
Set and Impose Fees	73%
Hire and Fire Agency Head	65%
Request a Public Health Levy	39%
Impose Taxes for Public Health	18%

n=1,565
**Among LHDs with a Local Board of Health.*

CHAPTER 3

Financing

- What Were LHD Total Annual Expenditures?
- What Were the Per Capita Expenditures and Revenues for LHDs?
- Did LHDs in Some States Spend More Money Per Person?
- What Were the Sources of LHD Revenues?
- Did Revenue Sources Vary by the Size of the Population Served?
- Did States Differ in Proportion of Revenue from Specific Sources?
- What Was the Nature of the Change in LHDs' Total Expenditures in the Most Recently Completed Fiscal Year?
- Did LHDs Have Rollover Reserve Funds or Contingency Funds? Did They Control the Use of the Funds?
- What Was the Nature of the Net Change in LHD Reserve Funds in the Most Recently Completed Fiscal Year?
- What Was the Median Per Capita Dollar Value of LHDs' Reserve Fund?



FAST FACTS

LHDs had a median annual expenditure of $1.5 million.

18 percent of LHDs had annual expenditures less than $500,000; 18 percent had annual expenditures of more than $5 million.

The median LHD per capita expenditure was $41; the median LHD per capita revenue was $44.

In six states, the LHD per capita expenditure was less than $20; in 10 states, it was $55 or more.

55 percent of LHDs reported an increase and 34 percent reported a decrease in their expenditures in the most recent fiscal year.

Local sources provided the greatest percentage of LHD revenues (26%), followed by state direct (21%).

41 percent of LHDs reported an increase and 41 percent reported a decrease in their reserve fund during the fiscal year.

Background

The 2010 Profile survey obtained data on several measures of LHDs' financial situation, including total revenues and total expenditures for their most recently completed fiscal year. Unlike 2008 and prior waves of the Profile study, the 2010 Profile also collected data about the total revenues and total expenditures for the year prior to the most recently completed fiscal year. These new data points provided additional measures of data validity during the data cleaning process. They also enabled the assessment of changes in an LHD's financial situation between the most recently completed year and the year prior to that year.

For the most recently completed fiscal year, LHDs were asked to detail the revenues received by the following categories of funding sources: city/township/town, county, state direct, federal pass-through (excluding certain funding streams that were collected separately), federal direct, Public Health Emergency Response (PHER), American Reinvestment and Recovery Act (ARRA), Medicaid, Medicare, private foundations, private health insurance, patient personal fees, non-clinical fees and fines, tribal, and other.

Collecting error-free data on LHD financing that are comparable across the United States remains challenging despite the additional reference points for verification of data accuracy collected by the 2010 Profile survey. Consequently, the data reported in this chapter should be interpreted with some caution for several reasons. First, data were missing for all or some financial fields because some LHDs skipped the funding section of the questionnaire entirely. Other LHDs reported some numbers (such as overall expenditures and revenues) but skipped the more detailed breakout of revenue sources. Relatively larger amounts of missing data lead to a greater degree of approximation than was necessary for other chapters of this report based on the core questions. To address this issue, where relevant, the number of observations on which statistics are computed is reported throughout this chapter. Some states are excluded from the state-level analyses due to insufficient data, particularly as related to component breakouts of revenue sources.

Second, early analyses and follow-up with LHDs regarding the revenue source data suggest that some LHDs that did provide data on revenue sources had difficulty reporting this information according to the categories in the questionnaire. In particular, 40 percent of LHDs reported difficulty distinguishing between state direct and federal pass-through revenue sources. Additionally, many LHDs included some funds in the "Other" category, while leaving some specific revenue source fields blank. In some cases, Other revenues represented funding streams that were not included as specific categories in the Profile questionnaire (e.g., interest income, donations). In other cases, the Other category included one or more of the specific revenue sources that the responding LHD could not separate into the questionnaire categories.

Third, LHD fiscal years do not all operate on the same cycle. LHDs reported financial data from different periods. The most recently completed fiscal year for 48 percent of LHDs ended on June 30, 2010, and for 37 percent of LHDs it ended on December 31, 2009. The remaining 15 percent reported other fiscal year ending dates.

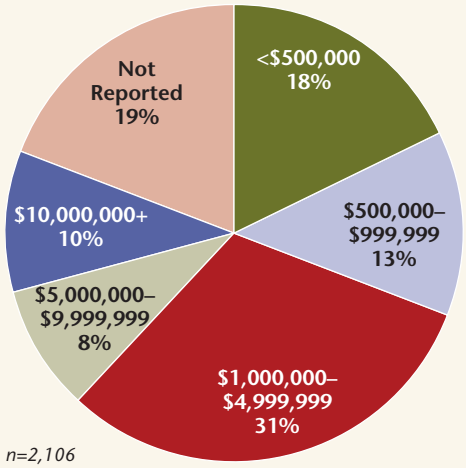
Finally, 10 percent of LHDs reported that they could not obtain any of the data for the financial section of the questionnaire. Twenty-seven percent reported they could obtain some of the financial data but not all, and 63 percent reported they could obtain all of the financial data. Following cleaning and analysis, however, the data showed that 31 percent could provide all of the financial information, another 55 percent could provide some of the financial information, and 14 percent could not provide any of the financial information. Data for the District of Columbia were not included in the analysis because its status as both a state and local health department results in extreme values relative to other LHDs.

What Were LHD Total Annual Expenditures?

Figure 3.1 shows the distribution of total annual LHD expenditures. Thirty-one percent had expenditures of less than $1 million, another 31 percent had expenditures of $1 to $4.99 million, and 18 percent had expenditures of $5 million or more. The remaining 19 percent of LHDs did not report any data on this item.

Figure 3.2 shows the mean and quartiles of total annual expenditures for all LHDs by population category. Due to presence of high outliers, and skewed data distribution, the mean of expenditures was much higher than the median in each population category. The median annual expenditure for all LHDs was $1.5 million and ranged from $512,000 for LHDs serving populations of less than 25,000 to $58.5 million for LHDs serving populations of one million or more.

FIGURE 3.1 | Percentage Distribution of LHDs, by Total Annual LHD Expenditures Category



n=2,106

Note: Due to rounding, percentages do not add to 100%.

FIGURE 3.2 | Mean and Quartiles of Total Annual LHD Expenditures for All LHDs, by Size of Population Served

Size of Population Served	Mean	25th Percentile	50th Percentile (Median)	75th Percentile
All LHDs	$8,620,000	$564,000	$1,540,000	$4,470,000
<25,000	$833,000	$251,000	$512,000	$1,080,000
25,000–49,000	$1,830,000	$698,000	$1,300,000	$2,360,000
50,000–99,999	$3,470,000	$1,370,000	$2,720,000	$4,370,000
100,000–249,999	$7,270,000	$3,550,000	$6,060,000	$9,050,000
250,000–499,999	$18,400,000	$8,290,000	$13,400,000	$21,000,000
500,000–999,999	$52,900,000	$17,700,000	$25,900,000	$47,400,000
1,000,000+	$168,000,000	$38,400,000	$58,500,000	$138,000,000

n=1,709

What Were the Per Capita Expenditures and Revenues for LHDs?

Figure 3.3 shows the mean and median annual per capita expenditures and revenues, by size of population served and type of governance. Overall, the median per capita LHD revenues was $3 more than the median per capita LHD expenditures of $41. The difference between these two financial measures was prominent for LHDs serving jurisdictions with less than 25,000 people and units of state agencies.

FIGURE 3.3 | Median and Mean Annual Per Capita Expenditures and Revenues, by Size of Population Served and Type of Governance

	Expenditures		Revenues	
LHD Characteristics	**Median**	**Mean**	**Median**	**Mean**
All LHDs	$41	$57	$44	$60
Size of Population Served				
<25,000	$48	$67	$54	$73
25,000–49,999	$37	$50	$41	$54
50,000–99,999	$38	$49	$39	$49
100,000–249,999	$39	$46	$38	$46
250,000–499,999	$36	$52	$36	$50
500,000–999,999	$42	$72	$42	$72
1,000,000+	$37	$74	$37	$80
Type of Governance				
State	$46	$61	$52	$69
Local	$38	$53	$39	$55
Shared	$67	$86	$67	$92
	n=1,709		*n=1,557*	

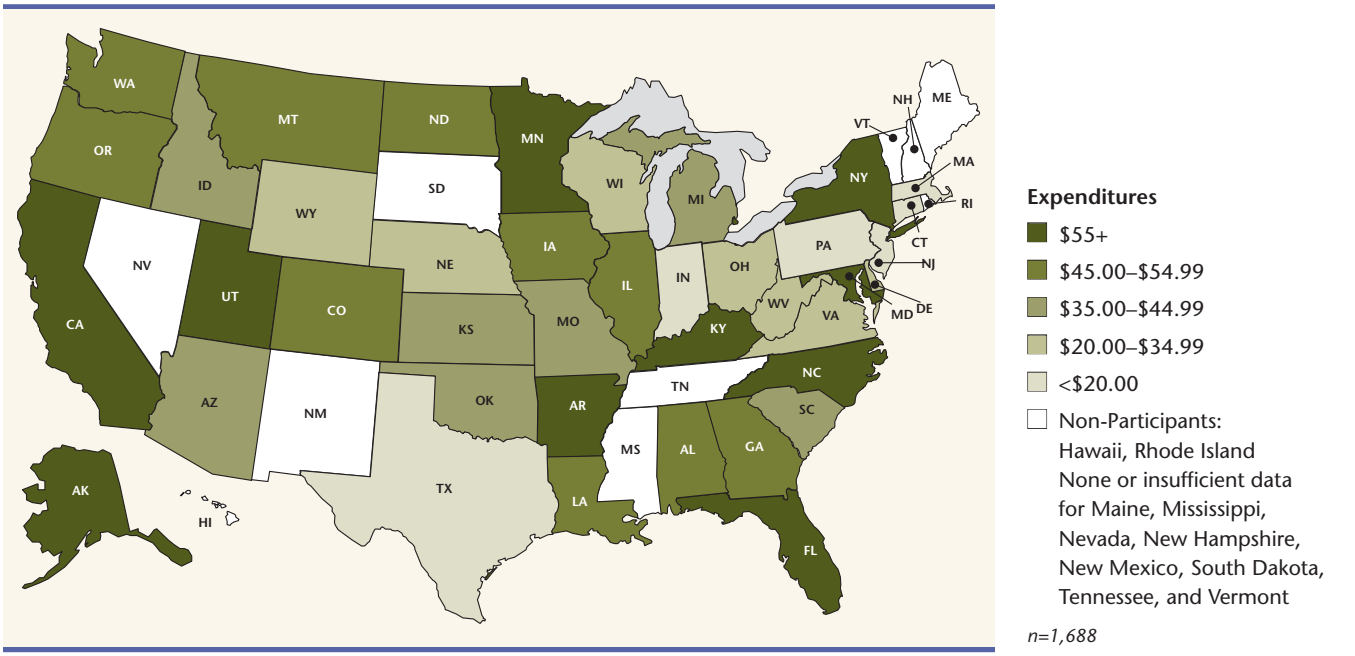
Median expenditures ranged from a low of $36 per person for LHDs serving jurisdictions of 250,000 to 499,999 people to a high of $48 per person for LHDs serving populations less than 25,000. Median expenditures by type of governance varied notably, with median annual per capita expenditures of $38 for units of local governance, $46 for units of state governance, and $67 for LHDs with shared state and local governance.

The variation in median per capita revenues was similar to the pattern of variation seen in per capita expenditures by LHD size and type of governance. Revenue per capita ranged from a low of $36 per person for LHDs serving jurisdictions of 250,000 to 499,999 people to a high of $54 per person for LHDs serving populations less than 25,000. Median revenues showed variation by type of governance, with median annual per capita revenues of $39 for units of local governance, $52 for units of state governance, and $67 for LHDs with shared state and local governance.

Did LHDs in Some States Spend More Money Per Person?

Figure 3.4 presents the map of state-level variation in median annual per capita LHD expenditures. Median per capita expenditures ranged from a low of $10 for the state of Indiana to a high of more than $100 per capita for the states of Maryland and New York. Median per capita LHD expenditures was less than $20 in six states, $20 to $44.99 in 15 states, and $55 or more in 10 states.

FIGURE 3.4 | Median Annual Per Capita LHD Expenditures, by State (Map)

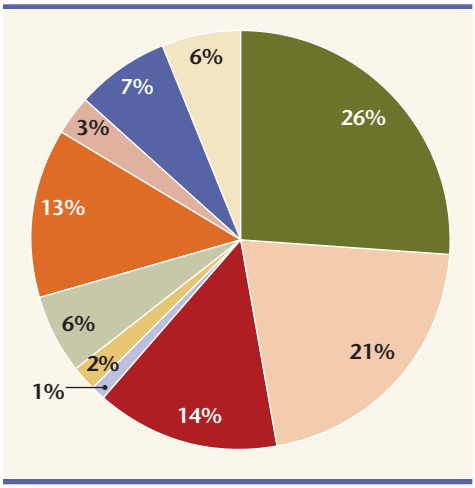


n=1,688

What Were the Sources of LHD Revenues?

The 2010 Profile questionnaire asked LHDs to detail the revenues received by the following categories of funding sources: city/township/town sources, county sources, state direct sources, federal pass-through sources and direct sources (excluding PHER and ARRA), PHER, ARRA, Medicaid, Medicare, private foundations, private health insurance, patient personal fees, non-clinical fees and fines, tribal sources, and other. For Figure 3.5, city/township and county sources were combined and categorized as "Local"; non-clinical fees and fines and patient personal fees as "Fees," and all other sources, including private foundations and tribal sources, as "Other." The percent of local public health revenues presented in this figure is computed by

FIGURE 3.5 | Percentage of Total Annual LHD Revenues, by Revenue Source



n ranged from 1,427 to 1,480

Note: Due to rounding, percentages do not add to 100%.

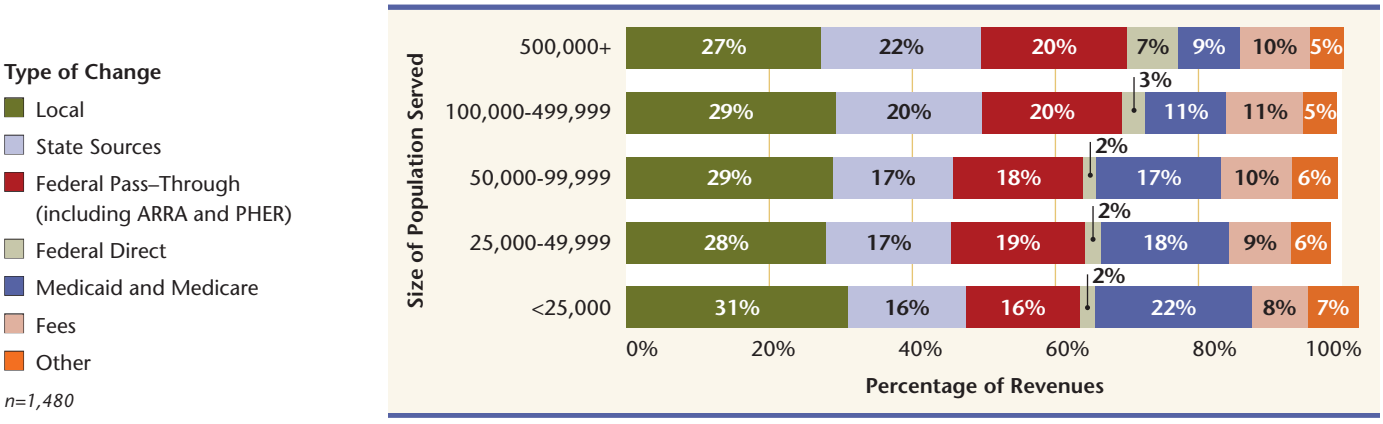
using the total amount of funds for all LHDs for each of the sources as numerators with the total of all LHD revenues from all sources as the denominator.

Local funds from city and county sources constituted the largest proportion of overall revenues for LHDs, comprising 26 percent of all revenues, followed by state direct (21%), and federal pass-through (14%). PHER and ARRA, two new categories included in the 2010 questionnaire, comprised three percent of the overall revenue.

Did Revenue Sources Vary by the Size of the Population Served?

The variation in revenue sources by population size is presented in Figure 3.6. In contrast to the data presented in Figure 3.5, Figure 3.6 shows the mean percentage of revenues from different revenue sources at the individual LHD level. LHDs varied regarding the relative share of revenue from certain sources by the size of the population served. For instance, LHDs serving smaller populations had relatively greater share of funding from Medicaid and Medicare than LHDs serving larger populations—22 percent for LHDs serving jurisdictions with populations of less than 25,000 and 9 percent for LHDs serving jurisdictions with 500,000 or more people. LHDs serving larger populations, on the other hand, received a relatively greater share of their revenues from state and federal pass-through sources than LHDs serving smaller jurisdictions.

FIGURE 3.6 | Mean Percentage of Total LHD Revenues from Selected Revenue Sources, by Size of Population Served



Did States Differ in Proportion of Revenue from Specific Sources?

The percentage of total LHD revenues from selected sources for each state is shown in Figure 3.7. Due to lower reporting for the detailed revenue data fields, and the relatively smaller number of LHDs in some states, the results presented in this table must be viewed with some caution. Those states with low item response and/or small number of respondents were marked as having insufficient data and were not included in Figure 3.7. Regardless of these noted data limitations, the data support the observation that LHD revenues from local, state, federal pass-through, Medicare, and Medicaid as a percent of total revenues varied widely by state.

FIGURE 3.7 | Percentage of Total Annual LHD Revenues, by Revenue Source and by State

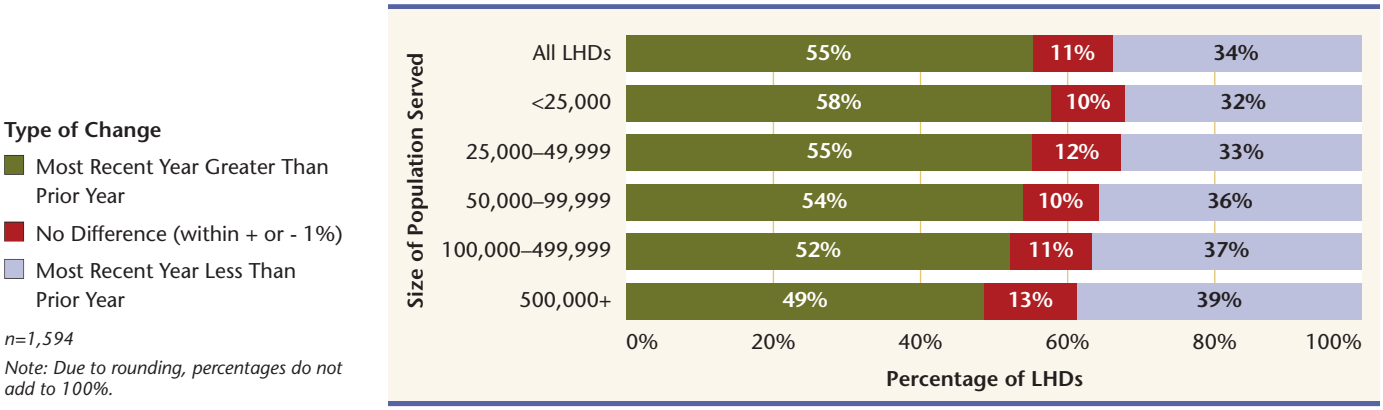
State	Local	State Direct	Federal Pass-Through (incl ARRA and PHER)	Federal Direct	Medicaid and Medicare	Fees	Other
AL	16%	6%	10%	4%	55%	6%	4%
AR	7%	17%	20%	0%	45%	0%	12%
AZ	30%	12%	40%	5%	1%	12%	1%
CA	8%	32%	15%	7%	28%	8%	2%
CO	32%	16%	23%	8%	3%	6%	11%
CT	43%	19%	14%	16%	1%	7%	0%
FL	8%	31%	23%	2%	19%	10%	7%
GA	8%	36%	26%	4%	6%	13%	6%
IA	25%	17%	19%	1%	27%	7%	4%
ID	12%	23%	45%	1%	5%	10%	4%
IL	25%	16%	15%	18%	18%	4%	3%
IN	51%	4%	20%	11%	1%	12%	1%
KS	37%	11%	26%	3%	9%	8%	6%
KY	11%	18%	13%	8%	45%	3%	1%
MA	59%	7%	9%	12%	7%	5%	1%
MD	15%	45%	24%	1%	6%	5%	3%
MI	16%	17%	32%	8%	12%	8%	7%
MN	25%	16%	17%	7%	17%	12%	5%
MO	45%	6%	14%	9%	11%	12%	4%
MT	19%	4%	27%	11%	22%	10%	8%
NC	34%	14%	12%	1%	29%	6%	4%
ND	42%	13%	24%	1%	7%	9%	4%
NE	24%	18%	32%	3%	5%	12%	6%
NJ	52%	14%	19%	2%	8%	4%	1%
NY	5%	49%	5%	12%	22%	5%	2%
OH	38%	6%	17%	5%	7%	22%	5%
OK	56%	14%	20%	3%	2%	3%	2%
OR	18%	16%	15%	5%	30%	9%	7%
SC	2%	31%	44%	0%	17%	4%	3%
TX	24%	12%	33%	20%	2%	8%	2%
UT	24%	9%	37%	1%	6%	23%	1%
VA	37%	33%	17%	2%	2%	7%	1%
WA	37%	17%	18%	3%	4%	19%	3%
WI	47%	8%	18%	5%	9%	10%	3%
WV	10%	42%	27%	1%	7%	9%	4%
WY	47%	9%	28%	0%	8%	6%	1%

Note: Data for the following states are not reported in this table due to insufficient data—AK, DE, LA, ME, MS, NH, NM, NV, PA, SD, TN

What Was the Nature of the Change in LHDs' Total Expenditures in the Most Recently Completed Fiscal Year?

Figure 3.8 shows the nature of the change in LHDs' expenditures in the most recently completed fiscal year compared with the fiscal year prior to that year. Overall, during this 12-month period, 55 percent of LHDs reported an increase in their expenditures and 34 percent reported a decrease. The expenditures for a small proportion of LHDs (11%) remained relatively unchanged. A small yet consistent variation existed in the type of change in expenditures by the size of the population served by the LHDs. The proportion of LHDs with reduced expenditures ranged from 32 percent for LHDs serving jurisdictions with populations of less than 25,000 to 39 percent for LHDs serving jurisdictions with 500,000 or more people. Consistent with this pattern, a slightly higher proportion of LHDs serving smaller jurisdictions saw an increase in their expenditures than LHDs serving larger jurisdictions.

FIGURE 3.8 | Percentage Distribution of LHDs, by Type of Change in Total Expenditures and Size of Population Served



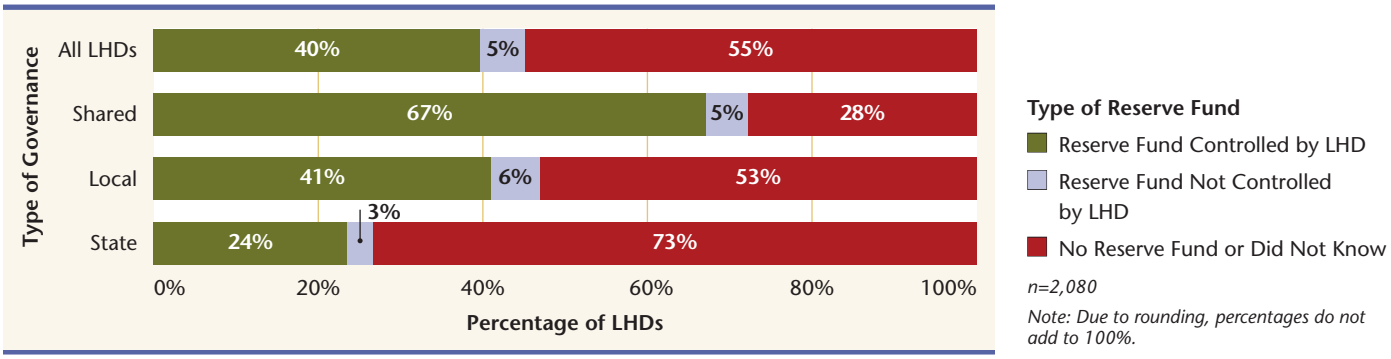
n=1,594

Note: Due to rounding, percentages do not add to 100%.

Did LHDs Have Rollover Reserve Funds or Contingency Funds? Did They Control the Use of the Funds?

Figure 3.9 shows the percent of LHDs that had a rollover reserve fund or a contingency fund and whether or not LHDs controlled the use of those funds. Fifty-five percent of LHDs had no reserve fund or did not know about its existence. Forty percent LHDs had a reserve fund or a contingency fund and controlled the use of the funds in the account. The remaining 5 percent had a reserve fund but did not have control over the use of the funds in such an account. The existence of and control over a reserve or contingency fund varied substantially by the type of LHD governance. Twenty-four percent of LHDs governed by the state health agency had such a reserve fund and controlled it, whereas 41 percent of locally governed LHDs and 67 percent with shared governance had control of the reserve fund.

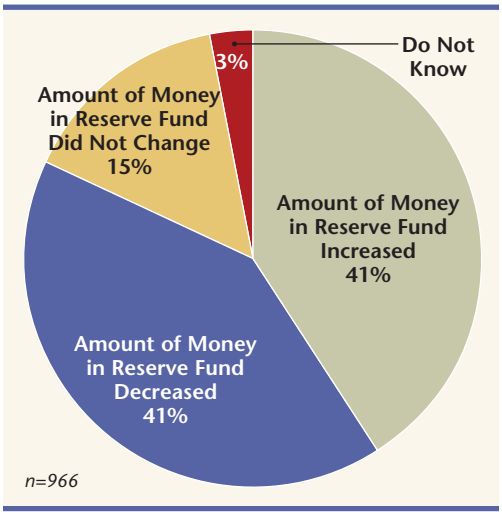
FIGURE 3.9 | Percentage of LHDs with Reserve Fund Controlled by LHD, Reserve Fund Not Controlled by LHD, and No Reserve Fund, by Type of Governance



What Was the Nature of the Net Change in LHD Reserve Funds in the Most Recently Completed Fiscal Year?

Figure 3.10 shows the percentage of LHDs by the type of net change in the reserve funds in the most recently completed fiscal year. Forty-one percent of LHDs reported an increase and an equal proportion reported a decrease in their reserve funds during the fiscal year. The value of the reserve funds remained unchanged for 15 percent of LHDs.

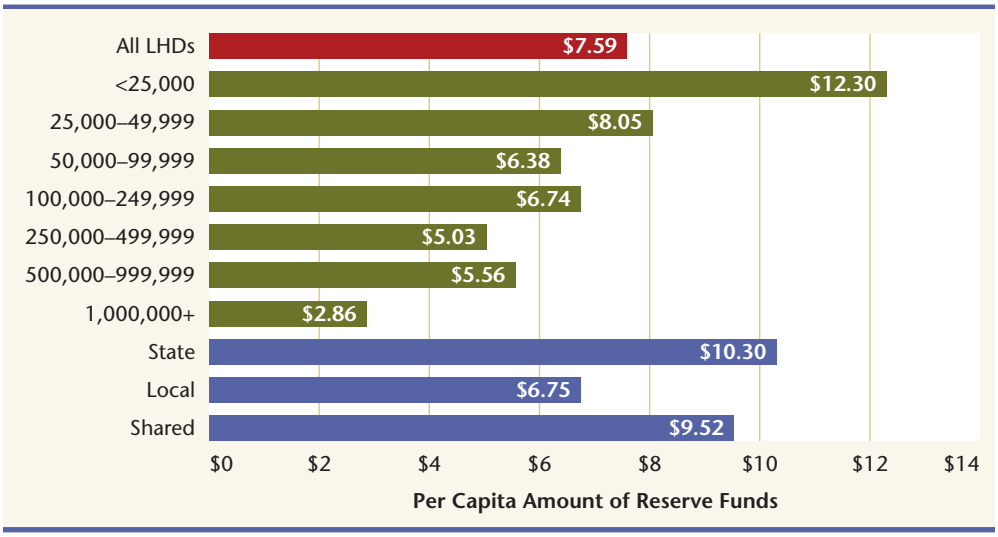
FIGURE 3.10 | Percentage Distribution of LHDs, by Type of Net Change in Reserve Fund



What Was the Median Per Capita Dollar Value of LHDs' Reserve Fund?

LHDs that reported having a reserve or a contingency fund had a median per capita of $8 in that fund at the end of the most recently completed fiscal year (as a reference, LHDs' median per capita expenditure was $41). Figure 3.11 shows a noteworthy variation in per capita dollar amount existed by LHDs' population size and governance category. Larger LHDs, in general, tended to have smaller amounts per capita in their reserve funds, although the relationship between the size of population served and the per capita amount of funds was not strictly linear. The median per capita amount was $12 for LHDs serving a population less than 25,000 people, $8 for LHDs serving jurisdictions with populations of 25,000 to 49,999 people, and nearly $3 for LHDs serving jurisdictions of one million or more people. LHDs governed locally had a median of nearly $7 per capita in their reserve fund, compared with about $10 per capita for LHDs with state or shared governance.

FIGURE 3.11 | Median Per Capita Dollar Amounts in LHD Reserve or Contingency Fund, by Size of Population Served and Type of Governance

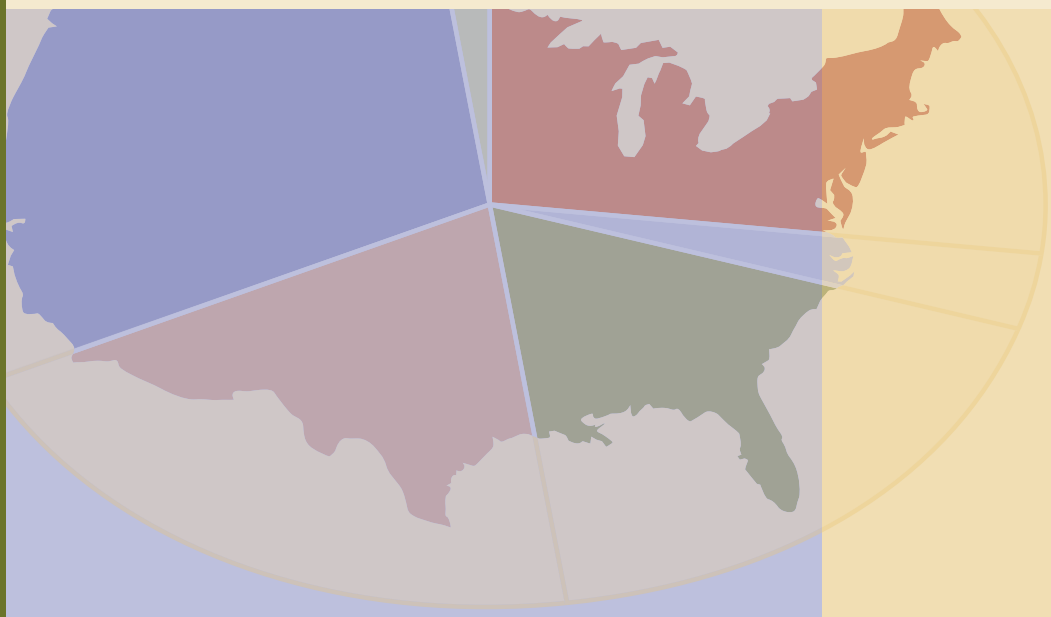


n=877

CHAPTER 4

LHD Leaders

- What Were the Demographic Characteristics of LHD Top Agency Executives?
- Did Characteristics of Top Executives Change Between 2008 and 2010?
- How Old Were Most LHD Top Executives?
- What Was the Education Level of LHD Top Executives?
- How Long Have Top Executives Worked at LHDs?
- Were New Top Executives Different from Experienced Top Executives?
- Do LHDs Have Health Officer Positions Separate from the Top Agency Executive?



FAST FACTS

91 percent of LHDs had a full-time top agency executive.

58 percent of LHD top executives were women.

45 percent of LHD top executives were age 50–59; 23 percent were 60 or older.

LHD top executives had been in their current positions for an average of nearly nine years.

17 percent of all LHDs were led by top executives with doctoral degrees.

Background

The 2010 Profile questionnaire included a set of questions regarding the characteristics of the LHD's top executive. These questions were, in most cases, identical to questions in the 2008 Profile questionnaire, and some comparisons between the data from the two study years are made below. These items, however, were not tested for significant differences. Categories of race and ethnicity from the 2000 Census were used in questionnaire items.

What Were the Demographic Characteristics of LHD Top Agency Executives?

Most top executives in LHDs worked full-time in their position (Figure 4.1). More than half were female (57.6%). A total of 6.5 percent reported a race other than white. Almost 2 percent reported Hispanic ethnicity.

Did Characteristics of Top Executives Change Between 2008 and 2010?

FIGURE 4.1 | Percentage of Top Agency Executives by Select Characteristics, 2008 and 2010*

	Percentage of Top Executives	
Characteristic	**2008**	**2010**
Part-Time	13.8%	9.0%
Female	56.3%	57.6%
Race Other Than White*	7.0%	6.5%
Hispanic Ethnicity	2.0%	1.8%

n ranged from 2,229 to 2,276 (2008)
n ranged from 2,036 to 2,087 (2010)
**Respondents could report more than one race.*

FIGURE 4.2 | Percentage of Top Agency Executives by Race, 2008 and 2010*

	Percentage of Top Executives	
Top Executive Race	**2008**	**2010**
White	93.5%	94.4%
Black	4.3%	3.6%
American Indian or Alaska Native	0.5%	0.9%
Asian	1.1%	1.0%
Native Hawaiian or Pacific Islander	0.3%	0.1%
Other	0.9%	1.0%

n ranged from 2,229 to 2,274 (2008)
n=2,056 (2010)
**Respondents could report more than one race.*

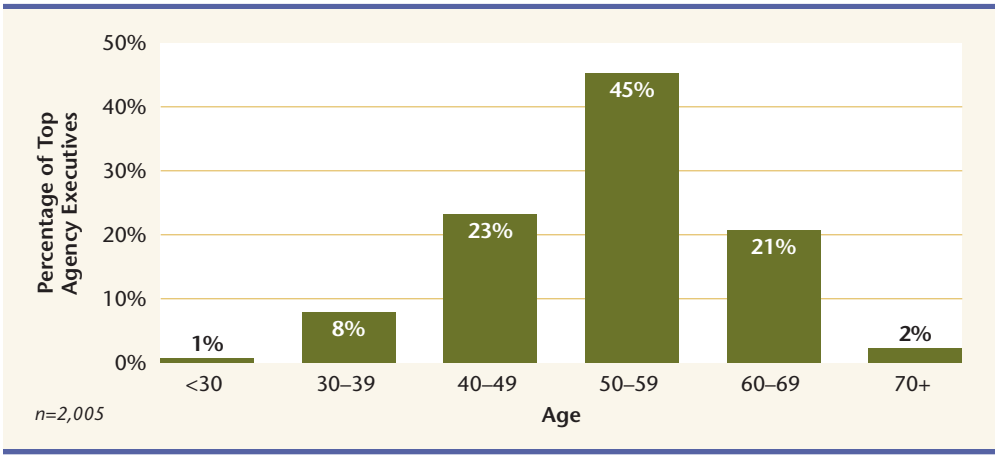
Characteristics of top executives have varied somewhat since 2008. The percentage of part-time top executives has decreased modestly, whereas the percent of top executives reporting a race other than white and top executives reporting Hispanic ethnicity decreased slightly from 2008 to 2010. The percent of female top executives increased slightly during the same time frame.

Figure 4.2 shows more detail on the race and ethnicity of top agency executives in 2008 and 2010. In 2008, 93.5 percent of top agency executives were white, and in 2010, 94.4 percent were white. The percent reporting black or African-American top agency executives decreased from 4.3 percent in 2008 to 3.6 percent in 2010.

How Old Were Most LHD Top Executives?

Figure 4.3 shows that almost half of LHD top executives (45%) were 50 to 59 years old, whereas 23 percent were 40 to 49 years old, 9 percent were less than 40 years old, and 23 percent were 60 years old and older. The median age of LHD top executives in 2010 was 54 years.

FIGURE 4.3 | Percentage Distribution of Top Agency Executives, by Age Category



What Was the Education Level of LHD Top Executives?

The 2010 Profile questionnaire included a series of questions on all degrees received by the top agency executive that was used to assess the highest degree received (Figure 4.4). The series of questions was skipped about 5 percent of the time; about 36 percent had an associate's or bachelor's degree as the highest degree; 42 percent had a master's degree, and 17 percent had a doctoral level degree.

Among the 335 total top executives with an associate's degree (not necessarily as the highest degree), 209 also reported licensure as a registered nurse (not shown).

The education level of the top agency executives varied greatly by LHD size. For LHDs serving a population less than 25,000, about 60 percent reported either an associate's or a bachelor's degree as the highest degree (Figure 4.5). Among LHDs serving populations of 500,000 or more, about 5 percent of top executives had a bachelor's degree or less, and 59 percent had a doctoral level degree.

FIGURE 4.4 | Percentage Distribution of Top Agency Executives, by Highest Degree Obtained

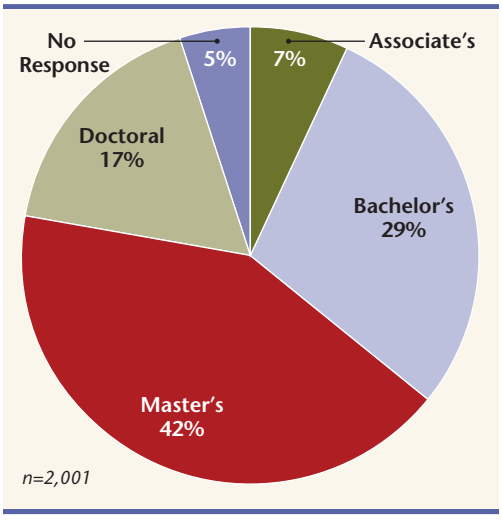
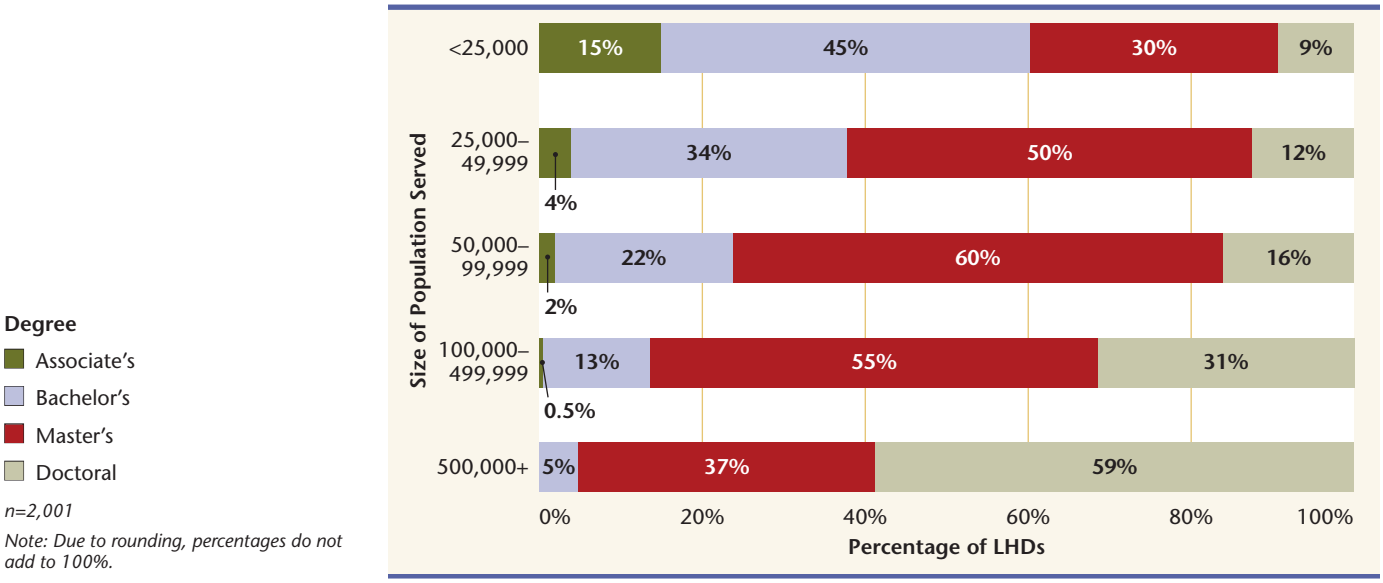


FIGURE 4.5 | Percentage Distribution of Top Agency Executive Highest Degree Obtained, by LHD Size of Population Served



How Long Have Top Executives Worked at LHDs?

FIGURE 4.6 | Mean Years of Tenure of Top Agency Executive, by Select LHD Characteristics

LHD Characteristics	Mean Tenure (Years)
All LHDs	*8.8*
Size of Population Served	
<25,000	9.2
25,000–49,999	9.6
50,000–99,999	8.9
100,000–499,999	7.9
500,000+	6.9
Type of Jurisdiction	
City/Town	9.4
County	8.7
Multi-City	12.9
Multi-County	7.6
Type of Governance	
State	8.0
Local	9.2
Shared	7.6
n=2,033	

The average tenure for an LHD top executive was 8.8 years (Figure 4.6). The tenure varied by size of populations served, type of jurisdiction, and type of governance. Average tenure for top executives in jurisdictions of 500,000 or more was shorter than that of their counterparts serving smaller jurisdictions. Average tenure for top executives in LHDs with jurisdictions that were county or multi-counties was shorter than for top executives in LHDs with jurisdictions that were city or multi-cities. Average tenure for top executives in LHDs with governance shared between state and local authorities or governed by state health agencies was shorter than for top executives in LHDs that were governed by local authorities.

Were New Top Executives Different from Experienced Top Executives?

Most current top executives—more than three in four—were in their first positions as LHD top executives. Among them, 22 percent had held their position for less than two years. These less experienced LHD top executives in their first positions were different from other LHD top executives in several ways. First-time top executives starting September 2008 or later were more likely to report a race other than white and slightly more likely to be female and to report Hispanic ethnicity than were their more experienced counterparts (Figure 4.7).

FIGURE 4.7 | Percentage of Top Agency Executives with Select Demographic Characteristics, by Experience Level*

Characteristic	Top Executives with Two or More Years Experience in Current or Previously Held Position	First Time Top Executives Starting September 2008 or Later
Female	57.4%	58.0%
Race Other Than White*	5.7%	8.8%
Hispanic Ethnicity	1.7%	2.0%

n ranged from 2,079 to 2,107
**Respondents could report more than one race.*

Do LHDs Have Health Officer Positions Separate from the Top Agency Executive?

More than half of all LHDs (62%) had a health officer or medical director position that was separate from the LHD top executive and most (77%) were part-time (Figure 4.8). Separate health officer positions were mostly full-time only in LHDs serving populations of 500,000 or more. LHDs that were governed by a state health agency were more likely to have a separate health officer, whereas those that were governed by local authorities were more likely to have a part-time health officer.

FIGURE 4.8 | Percentage of LHDs with Health Officer Separate from Top Agency Executive and Status of Position, by Size of Population Served and Type of Governance

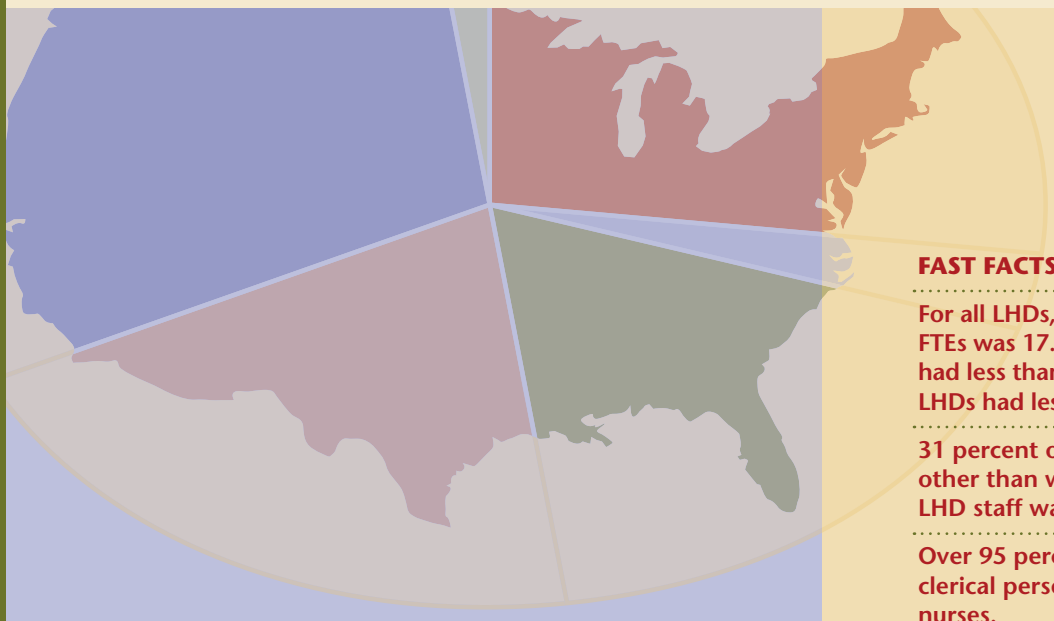
LHD Characteristics	Separate Health Officer	Part-Time Status
All LHDs	*62%*	*77%*
Size of Population Served		
<25,000	62%	83%
25,000–49,999	62%	87%
50,000–99,999	63%	81%
100,000–499,999	61%	65%
500,000+	64%	15%
Type of Governance		
Local Government	60%	85%
State Health Agency	72%	57%
Shared Governance	59%	59%

n ranged from 1,225 to 2,019

CHAPTER 5

LHD Workforce

- How Many FTE Positions Were Employed by LHDs?
- Did the Average Numbers of Employees and FTEs Vary by Size of the Population Served by the LHD?
- What Were the Demographic Characteristics of LHD Staff?
- What Kinds of Job Functions Were Most Often Included at LHDs?
- Did Occupations at the LHD Vary by the Size of the Population Served?
- What Were the Average Numbers of Staff Persons at LHDs?
- What Were the Typical Staffing Patterns of LHDs?
- Has the Workforce Size and Composition Changed Between 2008 and 2010?
- What Was the Overall Distribution of the LHD Workforce?
- How Many Employees Retired in the Past Year?
- Do LHDs Conduct Activities for Workforce Development?
- Did LHDs Use Public Health Core Competencies?



FAST FACTS

For all LHDs, the median number of FTEs was 17. About 87 percent of LHDs had less than 100 FTEs; 15 percent of LHDs had less than five FTEs.

31 percent of LHD staff was a race other than white and 12 percent of LHD staff was Hispanic.

Over 95 percent of LHDs employed clerical personnel and public health nurses.

2.4 percent of all LHD employees retired in the past year.

Nearly all LHDs reported having written position descriptions for all (84%) or some (13%) of their staff members.

Less than one-third (28%) of all LHDs have used the Core Competencies for Public Health Workers.

Background

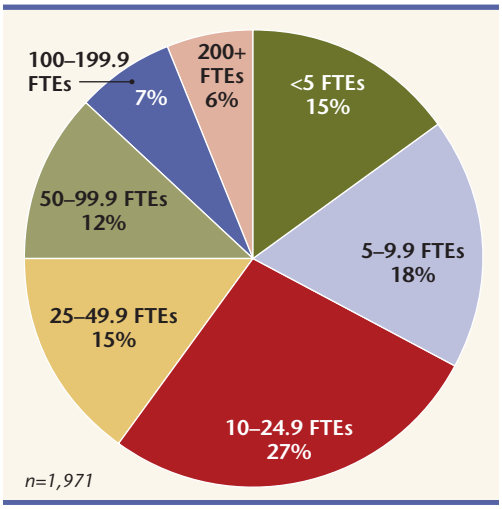
The 2010 Profile questionnaire included questions on the total number of LHD staff and the total number of full-time equivalents (FTEs) in the LHD workforce. Respondents were instructed to include all regular full-time, part-time, and contractual employees. The questionnaire also included items on race and ethnicity of LHD staff; race and ethnicity categories corresponded with 2000 U.S. Census definitions.

The workforce section of the questionnaire also included a set of questions on occupational categories staffed at LHDs and numbers of FTEs currently employed. The occupational category section was not intended to be an exhaustive set of all positions at LHDs. Categories included in the questionnaire were public health managers, public health nurse, public health physician, environmental health worker, epidemiologist, health educator, nutritionist, public health informatics specialist, public information specialist, behavioral health professional, emergency preparedness staff, and administrative or clerical personnel.

The 2010 Profile included questions on the number of retired employees, human resource activities conducted by the LHD for its workforce, and LHD use of core competencies. These questions were in a module added to the questionnaire for a random sample of LHDs.

How Many FTE Positions Were Employed by LHDs?

FIGURE 5.1 | Percentage Distribution of LHDs, by Number of FTE Positions



The 2010 Profile questionnaire included items on the total number of employees and the total number of FTE positions in the LHD's workforce. Figure 5.1 displays the number of FTEs reported by LHDs. Most LHDs (87%) had less than 100 FTEs. About 15 percent of LHDs had less than five FTEs; 6 percent had 200 or more FTEs.

Did the Average Numbers of Employees and FTEs Vary by Size of the Population Served by the LHD?

Both the mean and the median numbers of employees and FTEs are shown by size of population served in Figure 5.2. Because of high outliers in each population category, the mean number of employees and FTEs tended to be higher than the medians.

The total median number of FTEs ranged from 4 (for LHDs serving populations less than 10,000) to 530 (for LHDs serving populations of one million or more). The total median number of staff ranged from 6 (for LHDs serving populations less than 10,000) to 531 (for LHDs serving populations of one million or more). FTEs as a percent of all employees gradually increased from 73 percent among LHDs serving populations less than 10,000 to nearly 100 percent among LHDs serving populations of one million or more indicating a decreasing reliance on part-time workers as size of population served increased (not shown).

FIGURE 5.2 | Mean and Median Number of Employees and FTEs at LHD, by Size of Population Served

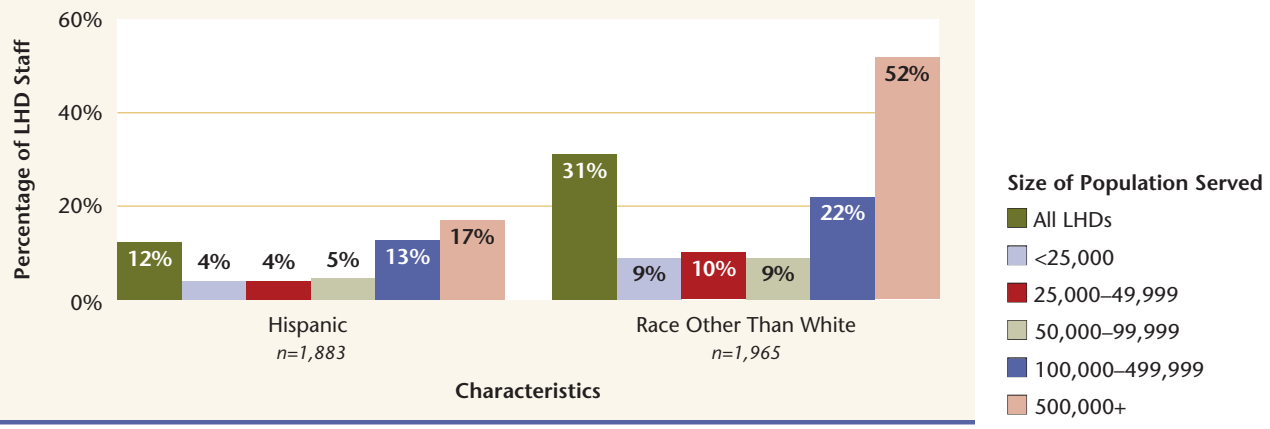
	Number of Employees		Number of FTEs	
Size of Population Served	Mean	Median	Mean	Median
All LHDs	73	20	64	17
<10,000	9	6	7	4
10,000–24,999	17	12	14	9
25,000–49,999	28	19	23	16
50,000–99,999	52	35	41	30
100,000–249,999	89	77	79	67
250,000–499,999	186	155	165	134
500,000–999,999	478	323	400	300
1,000,000+	969	531	936	530
	n=2,033		*n=1,971*	

What Were the Demographic Characteristics of LHD Staff?

The percentage of race and ethnicity for LHD staff is shown in Figure 5.3. Race other than white was determined by grouping black or African-American; American Indian or Alaska Native; Asian; Native, Hawaiian, or Other Pacific Islander; some other race; or two or more races into one category. Among all LHDs, 31 percent of LHD staff was a race other than white. As the size of population served increased, so did this percentage, ranging from 9 percent for LHDs serving populations less than 25,000 to 52 percent for LHDs serving populations of 500,000 and greater.

Among all LHDs, 12 percent of LHD staff was Hispanic. The percentage of LHD staff reported as Hispanic increased as the size of population served increased ranging from 4 percent for LHDs serving populations less than 50,000 to 17 percent for LHDs serving populations of 500,000 and greater.

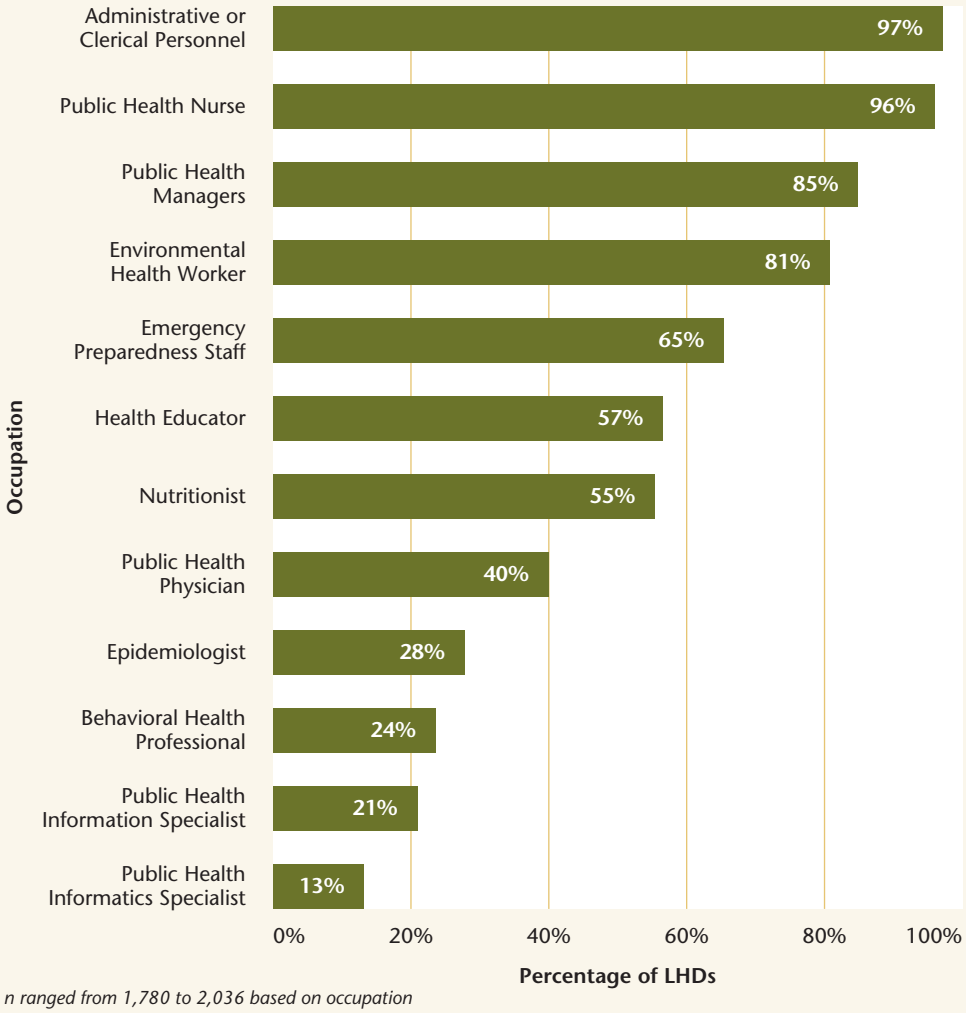
FIGURE 5.3 | Percentage of LHD Staff, by Select Characteristics and Size of Population Served



What Kinds of Job Functions Were Most Often Included at LHDs?

The 2010 Profile questionnaire included a section on selected categories of LHD workers. For certain occupations (not intended to include all employees), respondents indicated whether the LHD employed staff in this area and, if yes, the number of FTEs that was currently employed. Figure 5.4 indicates that more than 95 percent of LHDs employed administrative or clerical personnel and public health nurses. Public health managers, environmental health workers, emergency preparedness staff, health educators, and nutritionists were employed by more than 50 percent of all LHDs.

FIGURE 5.4 | Percentage of LHDs with Employees in Select Occupations



n ranged from 1,780 to 2,036 based on occupation

Did Occupations at the LHD Vary by the Size of the Population Served?

A detailed table of LHD employees in selected occupations by the size of the population served is shown in Figure 5.5. Among LHDs serving the smallest populations, 92 percent employed administrative or clerical personnel and

88 percent employed public health nurses; among LHDs serving the largest populations, all LHDs (100%) employed staff in these categories. Environmental health workers were employed by 57 percent of LHDs serving the smallest and 86 percent of LHDs serving the largest populations. A wide range of employment was shown for health educators and nutritionists. Less than one-third of the LHDs serving populations of less than 10,000 employed these health professionals, whereas 92 percent of LHDs serving populations of one million or more reported employing health educators and 86 percent reported employment of nutritionists.

FIGURE 5.5 | Percentage of LHDs with Employees in Select Occupations, by Size of Population Served

Occupation	All LHDs	<10,000	10,000–24,999	25,000–49,999	50,000–99,999	100,000–249,999	250,000–499,999	500,000–999,999	1,000,000+
Administrative or Clerical Personnel	97%	92%	95%	100%	99%	99%	99%	100%	100%
Public Health Nurse	96%	88%	95%	99%	97%	99%	100%	97%	100%
Public Health Manager	85%	69%	79%	85%	91%	99%	97%	98%	97%
Environmental Health Worker	81%	57%	78%	84%	88%	92%	91%	93%	86%
Emergency Preparedness Staff	65%	51%	50%	60%	70%	86%	95%	98%	100%
Health Educator	57%	28%	37%	57%	68%	79%	86%	93%	92%
Nutritionist	55%	31%	39%	54%	68%	74%	81%	84%	86%
Public Health Physician	40%	16%	23%	36%	42%	66%	73%	83%	97%
Epidemiologist	28%	10%	9%	17%	23%	52%	78%	91%	94%
Behavioral Health Professional	24%	5%	14%	16%	30%	37%	45%	69%	67%
Public Health Information Specialist	21%	5%	11%	13%	18%	34%	47%	79%	81%
Public Health Informatics Specialist	13%	2%	4%	6%	14%	23%	40%	50%	63%

n ranged from 1,780 to 2,036 based on occupation

What Were the Average Numbers of Staff Persons at LHDs?

Figure 5.6 shows the overall picture of local public health staff and occupations, for all LHDs and by size of population served. Medians instead of mean averages are used throughout this section to avoid the impact of high outliers. First, the median number of all FTE positions employed by LHDs is shown. Next, the figure displays the median number of FTEs for selected occupations.

For all LHDs, the median number of FTEs was 17, which included four administrative or clerical personnel, four public health nurses, two environmental health workers, one public health manager, part-time emergency preparedness staff, and part-time health educator on staff. As size of the population served increased, LHDs tended to have more occupations represented in staffing patterns, with one nutritionist at LHDs serving populations of 50,000 or more and at least one

public health physician at LHDs serving populations of 250,000 or more. LHDs serving large populations tended to have behavioral health professionals, public health information specialists, and public health informatics specialists.

FIGURE 5.6 | Median Number of FTE Employees in Select Occupations, by Size of Population Served

	All LHDs	<10,000	10,000–24,999	25,000–49,999	50,000–99,999	100,000–249,999	250,000–499,999	500,000–999,999	1,000,000+
Median Number of FTEs in All Staff Positions	17	4	9	16	30	67	134	300	530
Median FTEs of Select Occupations									
Administrative or Clerical Personnel	4	1	3	4	7	15	34	72	125
Public Health Nurse	4	1	3	4	7	13	25	45	65
Public Health Manager	1	0.9	1	1	2	5	6	13	20
Environmental Health Worker	2	0	1	2	3	8	17	27	35
Emergency Preparedness Staff	0.5	0	0	0.5	0.5	1	3	4	7
Health Educator	0.5	0	0	0.5	1	2	3	5	10
Nutritionist	0.1	0	0	0.2	1	2	5	8	16
Public Health Physician	0	0	0	0	0	0.4	1	1	5
Epidemiologist	0	0	0	0	0	0	1	2	5
Behavioral Health Professional	0	0	0	0	0	0	0	6	3
Public Health Information Specialist	0	0	0	0	0	0	0	1	1
Public Health Informatics Specialist	0	0	0	0	0	0	0	0	1

n ranged from 1,701 to 1,972 based on occupation

What Were the Typical Staffing Patterns of LHDs?

When viewed by the size of the population served, LHD staffing patterns were quite different (Figure 5.7). LHDs serving populations from 10,000 to 24,999 typically had nine FTE positions, including among others a public health manager, three public health nurses, three administrative or clerical personnel, and one environmental health worker. LHDs serving populations from 50,000 to 99,999 usually had about 30 FTE positions, including among others two public health managers, seven public health nurses, seven administrative or clerical personnel, three environmental health workers, one nutritionist, and part-time emergency preparedness staff. LHDs serving populations from 100,000 to 499,999 had a median of 83 FTEs, including among others five public health managers, 15 public health nurses, 18 administrative or clerical personnel, nine environmental health workers, two health educators, three nutritionists, two emergency preparedness staff, one epidemiologist, and a part-time public health physician.

FIGURE 5.7 | Median FTEs and Staffing Patterns for LHDs, by Size of Population Served

Serving 10,000–24,999	Serving 50,000–99,999	Serving 100,000–499,999
9 FTEs including:	30 FTEs including:	83 FTEs including:
1 Public Health Manager	2 Public Health Managers	5 Public Health Managers
3 Public Health Nurses	7 Public Health Nurses	15 Public Health Nurses
1 Environmental Health Worker	3 Environmental Health Workers	9 Environmental Health Workers
3 Administrative or Clerical Personnel	7 Administrative or Clerical Personnel	18 Administrative or Clerical Personnel
	1 Health Educator	2 Health Educators
	1 Nutritionist	3 Nutritionists
	0.5 Emergency Preparedness Staff	2 Emergency Preparedness Staff
		1 Epidemiologist
		0.5 Public Health Physician

n ranged from 1,701 to 1,971 based on occupation
Note: Numbers do not add to totals because listed occupational categories were not exhaustive of all LHD occupations.

Has the Workforce Size and Composition Changed Between 2008 and 2010?

The estimated size and composition of the LHD workforce in 2008 and 2010 are shown in Figure 5.8. The figure also shows the confidence interval for each estimate. The estimates of LHD workforce were developed by using special statistical weights to account for both survey non-responses and item non-responses for the total number of employees, the total number of FTEs, and the number of FTEs in each occupation category. In order to minimize the data loss, this report used all valid responses for a specific occupational category in the estimate development, even when such data for other occupational categories were missing for an LHD. This methodology differs from the estimation methods used in the main reports of the 2008 and 2005 Profiles, for which the total and occupation-specific estimates of workforce size used data from only those LHDs for which valid data were available for all occupational categories. Both estimation methods (using proper weights) produce estimates representative of all LHDs, but the two estimates are different because of the difference in approach used for missing data handling. Due to difference in the methodology, the 2008 estimates presented in this report are different from those presented in the 2008 Profile report.

The estimated overall LHD workforce in FTEs had decreased by about 3 percent from 2008 to 2010 (166,000 to 160,000), but this decrease was not statistically significant. Within specific occupational categories, many occupation estimates showed increases, including a 10 percent increase for nutritionists, an 11 percent increase for health educators, and a 15 percent increase for epidemiologists (not shown). Other occupation estimates had slight decreases except for public health nurses and environmental health workers, which showed a decrease of 15 percent and 10 percent, respectively, from 2008 to 2010 (not shown). Although most of the occupation-specific estimates changed, none of the changes were statistically significant.

FIGURE 5.8 | Estimated Size of LHD Workforce for All Staff and Select Occupations, 2008 and 2010

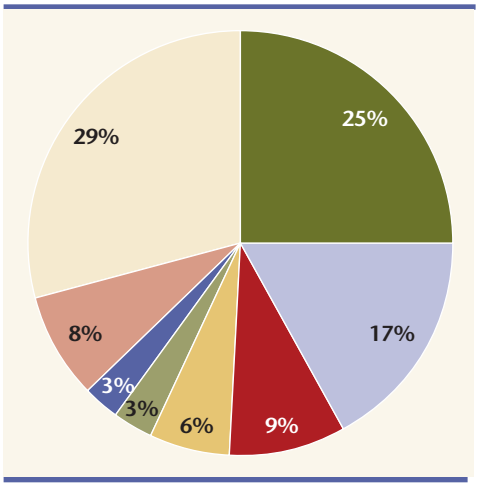
	2008			2010		
	Best Estimate	95% Confidence Interval	Percentage of All LHD Staff	Best Estimate	95% Confidence Interval	Percentage of All LHD Staff
All Staff Positions						
Total Employees	190,000	160,000–219,000	N/A	184,000	155,000–213,000	N/A
Total FTEs	166,000	141,000–191,000	100%	160,000	135,000–185,000	100%
Select Occupations (FTEs)						
Administrative or Clerical Personnel	38,400	32,300–44,400	23.1%	40,400	32,100–48,700	25.3%
Public Health Nurse	32,900	29,800–36,000	19.8%	27,900	25,100–30,800	17.4%
Public Health Managers	9,500	8,400–10,600	5.7%	9,500	8,400–10,600	5.9%
Environmental Health Worker	15,300	12,900–17,600	9.2%	13,800	11,700–15,900	8.6%
Emergency Preparedness Staff	N/A	N/A	N/A	2,700	2,300–3,100	1.7%
Health Educator	4,400	3,900–4,900	2.7%	4,900	3,400–6,300	3.1%
Nutritionist	4,200	3,700–4,700	2.5%	4,600	4,000–5,100	2.9%
Public Health Physician	2,100	1,700–2,600	1.3%	1,800	1,300–2,200	1.1%
Epidemiologist	1,300	920–1,600	0.8%	1,500	1,100–1,800	0.9%
Behavioral Health Professional	7,400	5,300–9,400	4.5%	5,600	4,100–7,100	3.5%
Public Health Information Specialist	440	370–500	0.3%	510	350–670	0.3%
Public Health Informatics Specialist	N/A	N/A	N/A	1,100	430–1,900	0.7%

n ranged from 1,701 to 2,033 based on occupation

Note: Numbers do not add to totals because listed occupational categories were not exhaustive of all LHD occupations.

Estimates for 2008 workforce are different from 2008 National Profile of Local Health Departments Report due to new weight methodology.

FIGURE 5.9 | Percentage Distribution of Occupations in the LHD Workforce



n ranged from 1,701 to 1,971 based on occupation

What Was the Overall Distribution of the LHD Workforce?

Figure 5.9 shows that almost half of the LHD workforce consisted of administrative or clerical personnel (25%), public health nurses (17%), and environmental health workers (9%). An additional 29 percent of LHD staff was not categorized; these were LHD staff included in the total FTEs but not identified in the selected occupational categories listed in the questionnaire.

How Many Employees Retired in the Past Year?

Figure 5.10 shows the mean and median number of employees who have retired in the past 12 months, by size of population served. The mean percentage of LHD employees who retired in the past year is 2.7 percent. There is little variation across size of population served, but there is a slight decrease for LHDs serving the largest population, more than 500,000 people. The median percentage is lower, at zero percent for all LHDs, with some variation by size of population served, peaking at 2.3 percent for LHDs serving the largest population. Figure 5.10 also reports the percentage of all LHD employees who retired—2.4 percent. This was calculated by dividing the estimated total number of employees reported as retired by the estimated total of employees in the LHD workforce. This percentage is slightly lower than the mean percentage. There is little variation in percentage by size of population served.

FIGURE 5.10 | Mean and Median Number and Percentage of Employees Retired and Percentage of All LHDs Employees Retired, by Size of Population Served

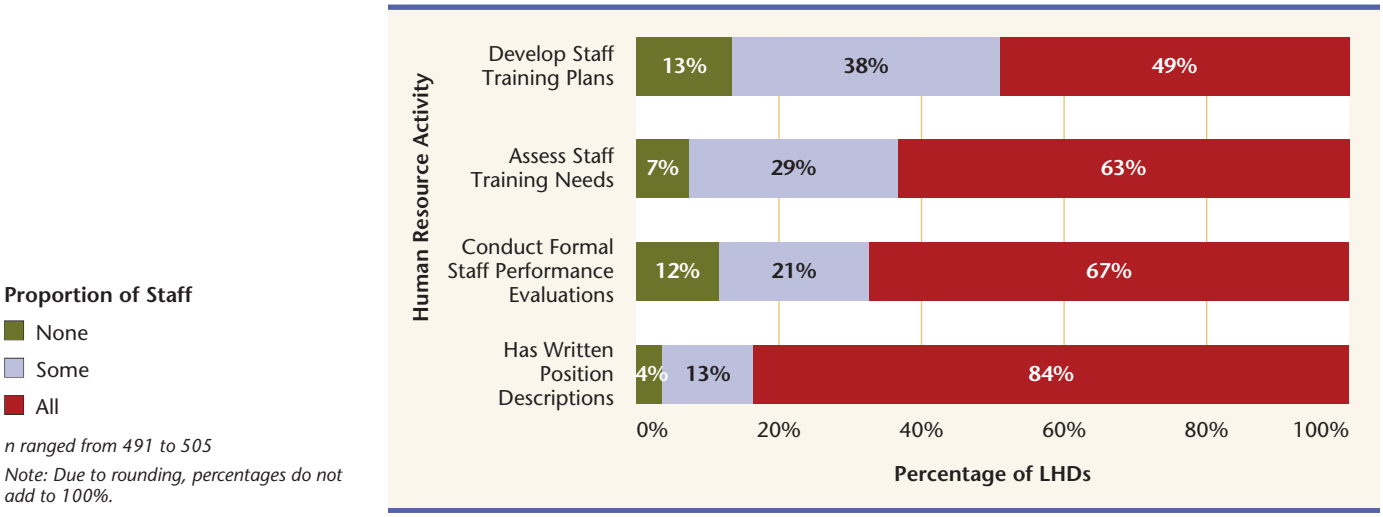
	Mean		Median		Percentage of All LHD Employees Retired
	Number of LHD Employees Retired	Percentage of LHD Employees Retired	Number of LHD Employees Retired	Percentage of LHD Employees Retired	
ALL LHDs	2	2.7%	0	0.0%	2.4%
<50,000	0	2.7%	0	0.0%	2.0%
50,000–499,999	2	2.7%	1	1.9%	2.4%
500,000+	12	2.4%	8	2.3%	2.5%

n=392

Do LHDs Conduct Activities for Workforce Development?

Figure 5.11 shows the extent to which LHDs conducted selected workforce development activities. Nearly all LHDs reported having written position descriptions for all (84%) or some (13%) of their staff members. Most LHDs conduct formal staff performance evaluations (67%) and assess staff training needs (63%) for all of their staff members. Approximately half of LHDs have developed training plans for all of their staff and 38 percent have developed training plans for some of their staff.

FIGURE 5.11 | Percentage of LHDs Conducting Select Human Resource Activities, by Specific Activity and Proportion of Staff for Whom the Activity Was Conducted



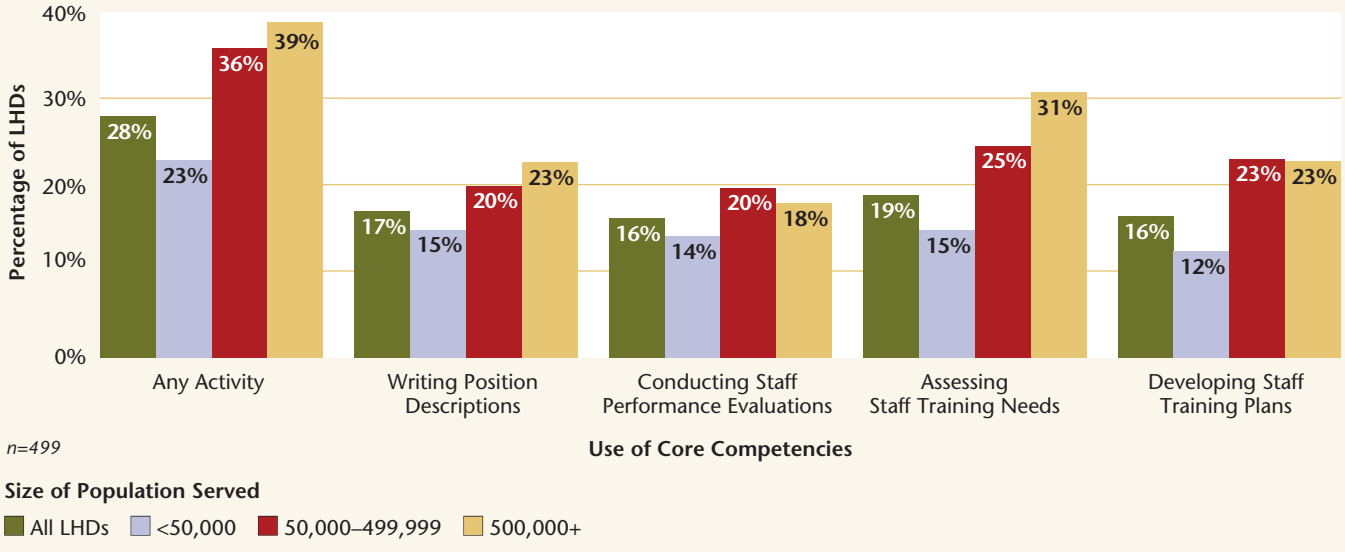
n ranged from 491 to 505

Note: Due to rounding, percentages do not add to 100%.

Did LHDs Use Public Health Core Competencies?

Figure 5.12 shows that less than one-third (28%) of all LHDs have used the *Core Competencies for Public Health Workers* from the Council on Linkages. The competencies were used most frequently to assess staff training needs (19% of LHDs). There was modest variation by size of population served; LHDs serving larger populations (500,000 and greater) were more likely than LHDs serving smaller populations (less than 50,000) to use the core competencies.

FIGURE 5.12 | Percentage of LHDs Using Core Competencies for Select Purposes, by Size of Population Served

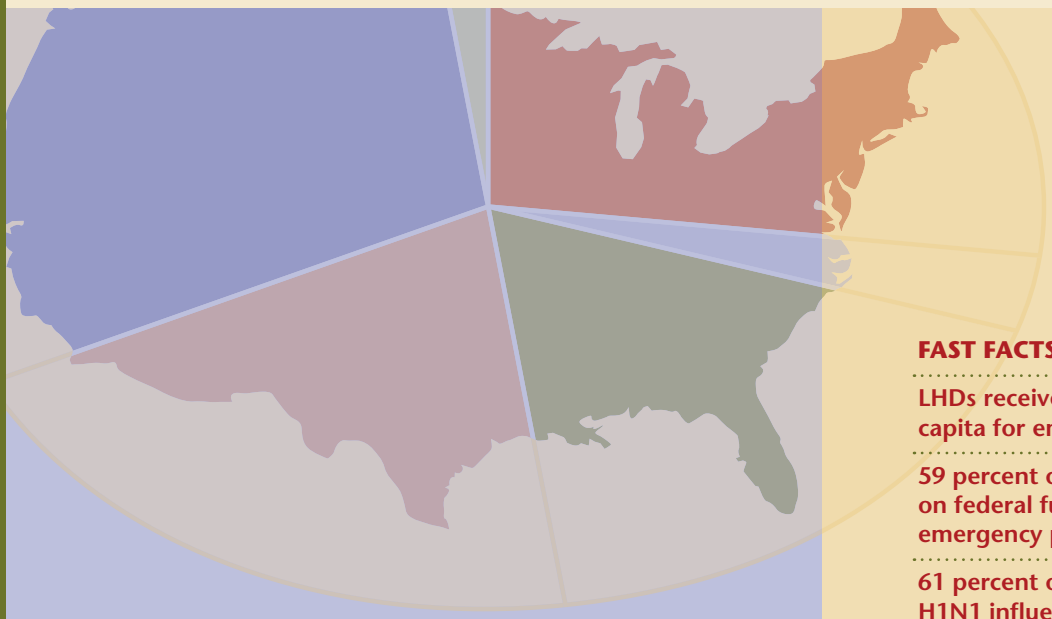


n=499

CHAPTER 6

Emergency Preparedness

- What Was LHD Level of Funding for Emergency Preparedness?
- What Were Sources of Revenue for Preparedness Activities?
- Did Funding Sources Vary by the Size of Population Served by the LHDs?
- Do LHDs Have Emergency Preparedness Staff and Designated Emergency Preparedness Coordinators?
- What Percentage of LHDs Responded Recently to an All-Hazards Event?
- What Type of All-Hazards Events Did LHDs Respond to Most Frequently?
- What Percentage of Non-Emergency Preparedness Staff Was Used by LHDs When Responding to an All-Hazards Event?
- Do LHDs Engage Volunteers for Preparedness Activities? What Are Predominant Sources of Volunteers?
- How Many Volunteers Were Registered with LHDs?



FAST FACTS

LHDs received a median of $2 per capita for emergency preparedness.

59 percent of LHDs rely exclusively on federal funding to support their emergency preparedness.

61 percent of LHDs responded to the H1N1 influenza outbreak.

On average, LHDs use 30 percent of their staff to respond to natural disasters.

93 percent of LHDs engaged volunteers for emergency preparedness activities.

63 percent of LHDs used volunteers from CERT, MRC, or American Red Cross for preparedness activities.

73 percent of LHDs registered volunteers.

Background

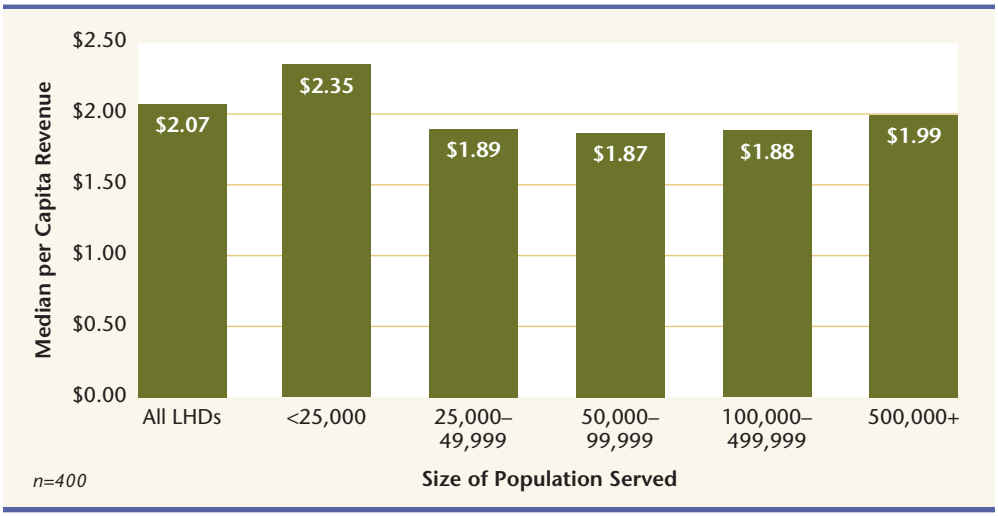
LHDs frequently respond to a broad range of disasters and public health emergencies. A thorough understanding of their capacity and experience with responding to such incidents is crucial to predicting the quality of their response to future emergencies. Questions on emergency preparedness (EP) included in the 2010 Profile questionnaire, sent to a nationally representative sample of 625 LHDs, allowed a reasonable situational analysis of the EP capacity of LHDs. This chapter presents descriptive analysis of staffing, funding capacity, and sources of LHD funding for preparedness activities. It also covers the type and frequency of past responses of LHDs to all-hazards incidents. This chapter includes analysis of the level of engagement of other staff and volunteers when responding to emergency events, in addition to the dedicated EP staff.

What Was LHD Level of Funding for Emergency Preparedness?

The median amount of LHD revenue for preparedness activities was $67,000 for the most recently completed fiscal year (data not shown).

Figure 6.1 shows the median per capita funding (i.e., total funding divided by jurisdiction population). LHDs had a median of $2.07 per capita revenue for preparedness activities. LHDs serving a population of less than 25,000 had median per capita revenue of $2.35, slightly more than LHDs serving larger population jurisdictions. Revenue per capita was less than $2.00 for LHDs serving jurisdictions with population of 25,000 or more, with almost no variation by size of population served.

FIGURE 6.1 | Median Per Capita Revenue for LHD Preparedness Activities for the Most Recently Completed Fiscal Year, by Size of Population Served

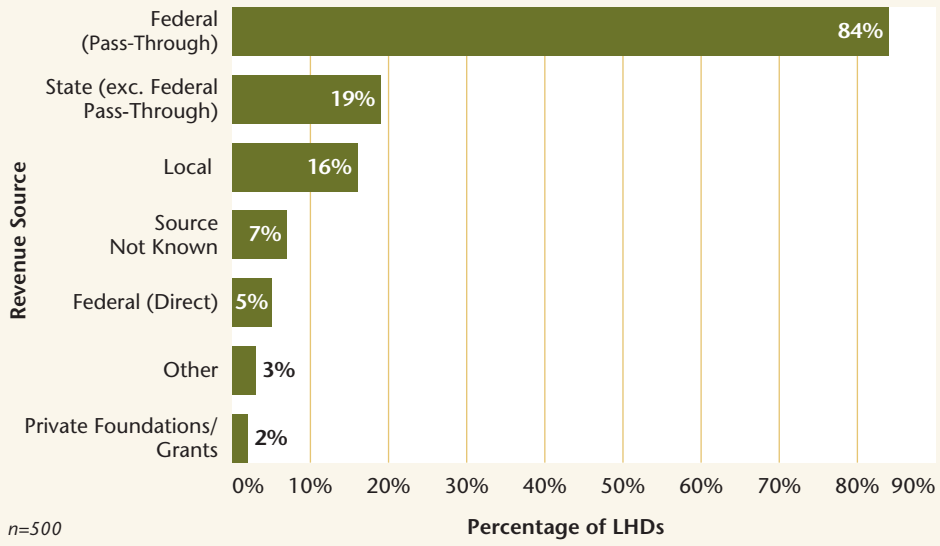


What Were Sources of Revenue for Preparedness Activities?

Federal dollars were the most common source of preparedness funding for LHDs; 59 percent of LHDs rely exclusively on federal funding to carry out their preparedness activities (data not shown). Figure 6.2 shows that federal

(pass-through) was one of the revenue sources for most LHDs (84%); nearly one in five LHDs received funds (other than federal pass-through) from their state. Sixteen percent of LHDs received some funding from local (city, county) sources for emergency preparedness activities.

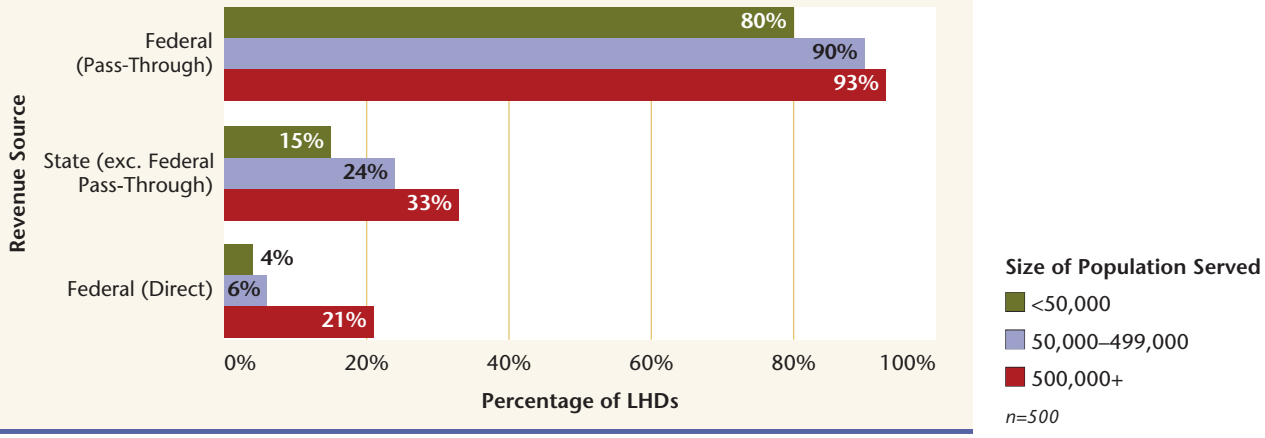
FIGURE 6.2 | Percentage of LHDs with Specific Sources of Revenue for Preparedness Activities for the Most Recently Completed Fiscal Year



Did Funding Sources Vary by the Size of Population Served by the LHDs?

Figure 6.3 shows variation in the percent of LHDs with specific sources of revenue for preparedness activities by size of population served. Larger LHDs were more likely to receive federal revenue than smaller ones. A considerably greater proportion (33%) of large LHDs serving jurisdictions with 500,000 people or more received state funds than medium (24%) or small (15%) LHDs. A greater percent of large LHDs also received federal direct funds for emergency preparedness activities than those serving smaller populations.

FIGURE 6.3 | Percentage of LHDs with Specific Source of Revenue for Preparedness Activities, by Size of Population Served

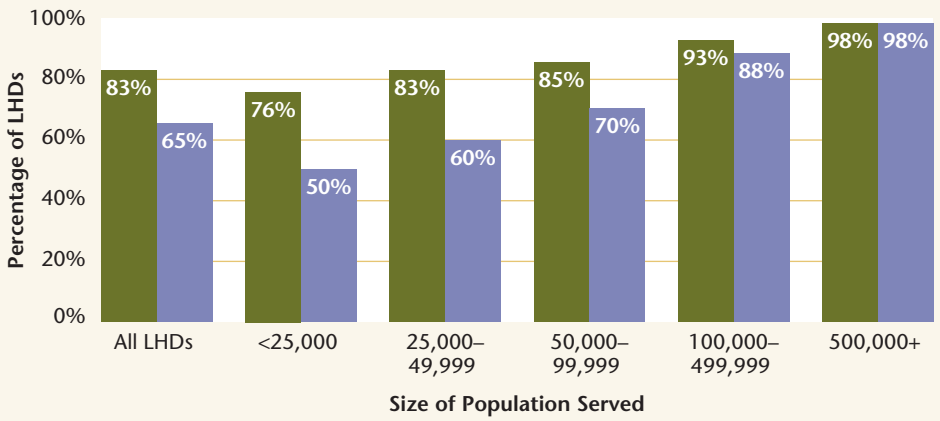


Do LHDs Have Emergency Preparedness Staff and Designated Emergency Preparedness Coordinators?

The workforce section of the core Profile questionnaire (sent to all LHDs) collected information on whether LHDs employed emergency preparedness (EP) staff as a part of their public health workforce. LHDs were also asked if they had a designated EP coordinator. Figure 6.4 shows the percentage of LHDs that had EP staff and a designated EP coordinator, by size of population served. Sixty-five percent of LHDs had at least one EP staff person and 83 percent had a designated EP coordinator. Notable variation in both the presence of EP staff and a designated EP coordinator existed among LHDs by size of population served. A greater percent of LHDs serving jurisdictions with larger populations had an EP coordinator and EP staff.

LHDs employed a median of 0.5 FTEs dedicated to EP. LHDs serving jurisdictions with larger populations had more FTE staff dedicated to EP. For instance, LHDs serving jurisdictions with 500,000 or more people had a median of four FTEs for EP (Figure 6.5).

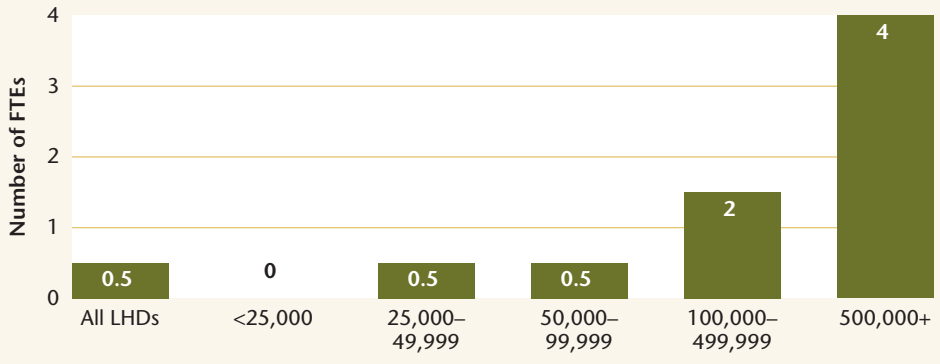
FIGURE 6.4 | Percentage of LHDs That Have Designated Emergency Preparedness Coordinator and Emergency Preparedness Staff, by Size of Population Served



EP Coordinator
EP Staff

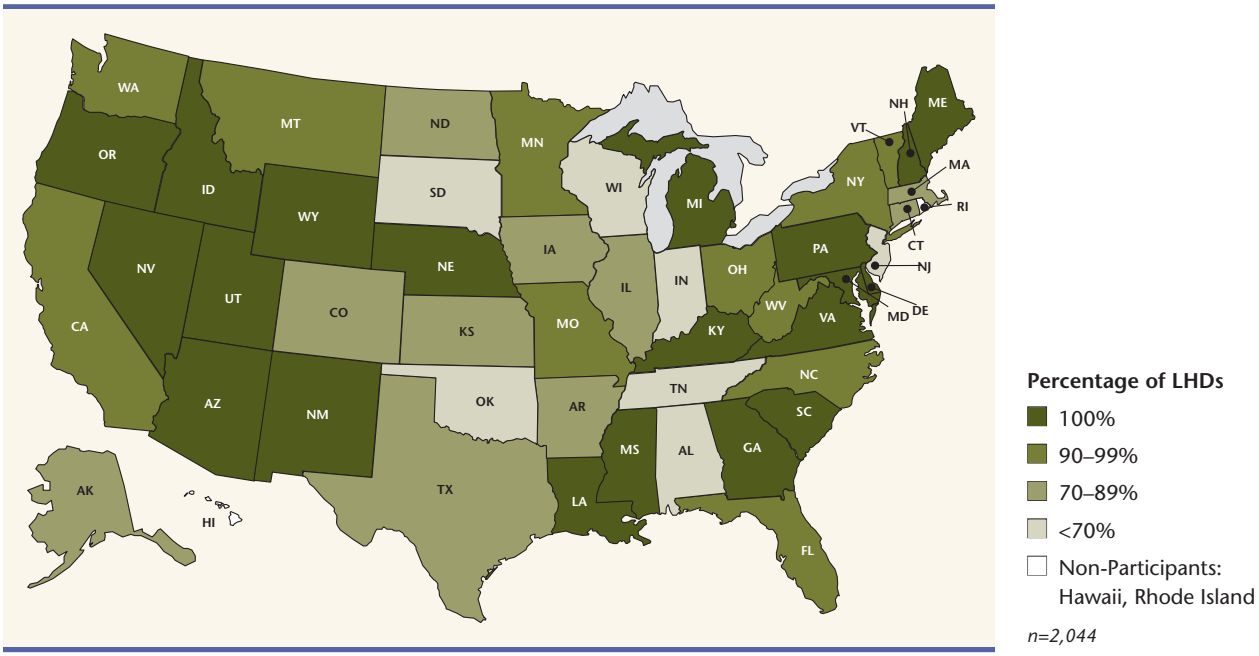
n ranged from 1,893 to 2,004

FIGURE 6.5 | Median Number of FTEs Employed for Emergency Preparedness Staff, by Size of Population Served



In order to see geographic variation by state, the percentage of LHDs with a designated EP coordinator was computed for each state (shown in Figure 6.6). All LHDs in 20 states had a designated EP coordinator. The percentage of LHDs with a designated EP coordinator was much smaller in some states, such as Alabama, New Jersey, Oklahoma, and South Dakota.

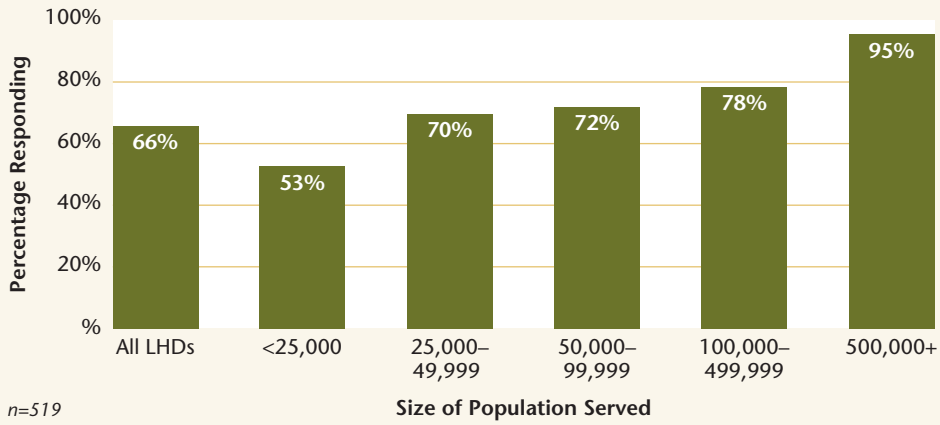
FIGURE 6.6 | Percentage of LHDs That Have Designated Emergency Preparedness Coordinator, by State (Map)



What Percentage of LHDs Responded Recently to an All-Hazards Event?

An estimated 66 percent of all LHDs responded to at least one event between January 2009 and late 2010. Figure 6.7 shows variation by the size of the population served by the LHD in the percent of LHDs that responded to at least one

FIGURE 6.7 | Percentage of LHDs That Responded to an All-Hazards Event, by Size of Population Served*



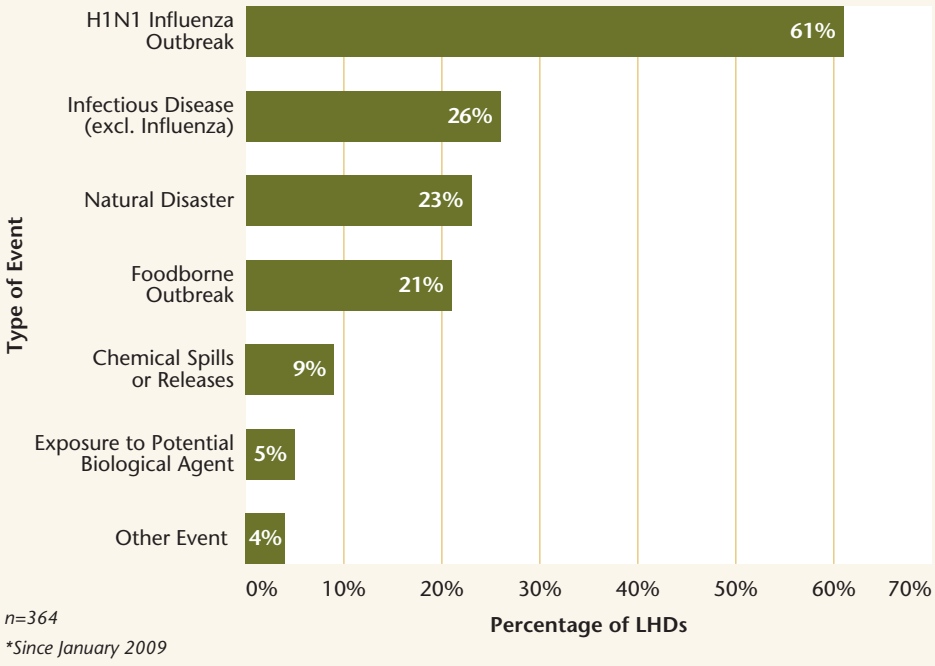
n=519
**Since January 2009*

all-hazards event since January 2009. The percent of LHDs responding to an all-hazards event increased uniformly as the size of the population served within the LHD jurisdiction increased. Nearly all LHDs serving a jurisdiction with 500,000 or more people responded to at least one all-hazards event. In contrast, 53 percent of LHDs serving a population jurisdiction with less than 25,000 people responded to an all-hazards event in the same period—January 2009 to the time of the survey.

What Type of All-Hazards Events Did LHDs Respond to Most Frequently?

LHDs respond to many other events besides large scale disasters or pandemics (i.e., foodborne outbreaks and infectious disease outbreaks). Figure 6.8 shows that most LHDs (61%) responded to the H1N1 influenza outbreak. More than one in five LHDs responded to infectious disease, natural disasters, and foodborne outbreaks during this period.

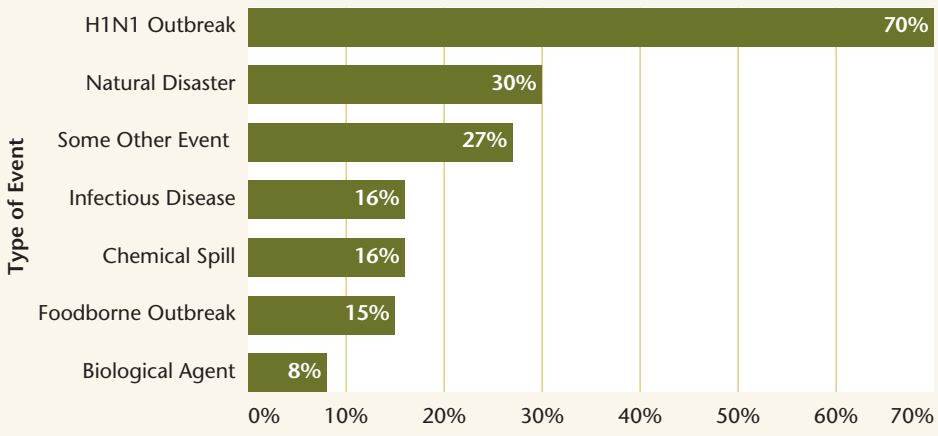
FIGURE 6.8 | Percentage of LHDs That Responded to a Specific All-Hazards Event*



What Percentage of Non-EP Staff Was Used by LHDs When Responding to an All-Hazards Event?

LHDs used an average of 70 percent of staff not otherwise dedicated to EP, when responding to the H1N1 influenza outbreak (Figure 6.9). Response to other events also required using non-EP staff. For instance, LHDs used an average of 30 percent of staff not otherwise dedicated to EP when responding to natural disaster events.

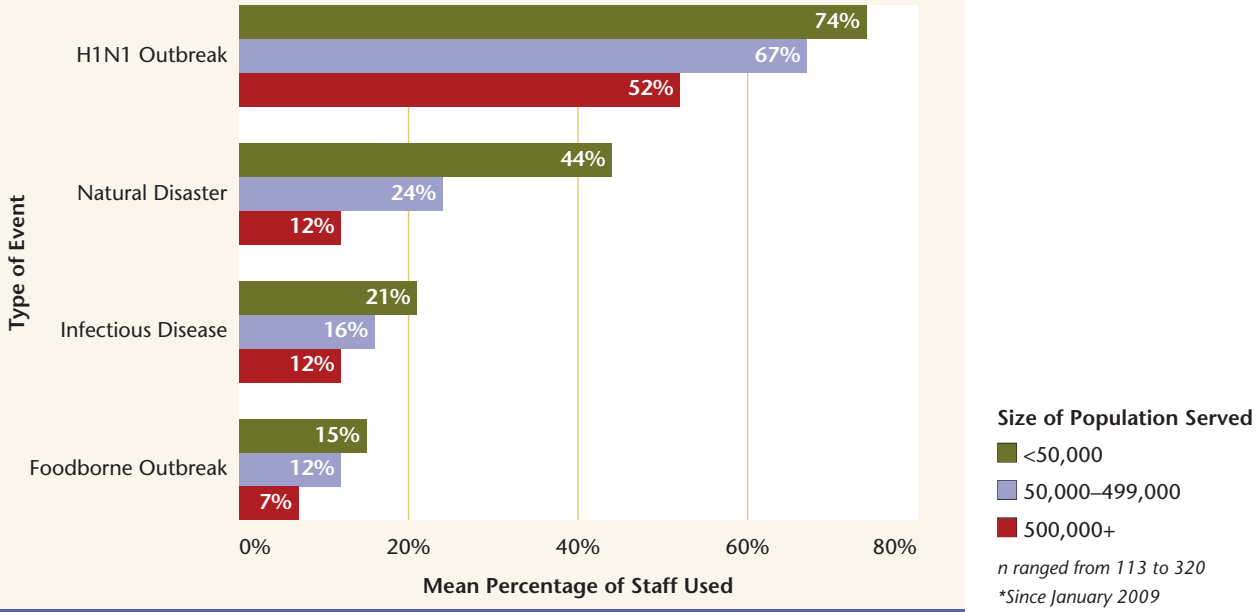
FIGURE 6.9 | Mean of Maximum Percent of Staff Outside of Dedicated Emergency Preparedness Staff Used When LHDs Responded to a Specific All-Hazards Event*



n ranged from 22 to 320
**Since January 2009*

Figure 6.10 shows considerable variation by population size in the maximum percent of non-EP staff used when responding to all-hazards events. LHDs serving jurisdictions with smaller populations had to use a larger percentage of their staff to respond to these events. For instance, when responding to the H1N1 outbreak, LHDs serving jurisdictions with populations of less than 50,000 used an average of up to 74 percent of their non-EP staff, whereas medium-sized LHDs used up to 67 percent, and the largest LHDs used up to 52 percent of non-EP staff.

FIGURE 6.10 | Mean of Maximum Percent of Staff Outside of Dedicated Emergency Preparedness Staff Used When LHDs Responded to a Select All-Hazards Event, by Size of Population Served*

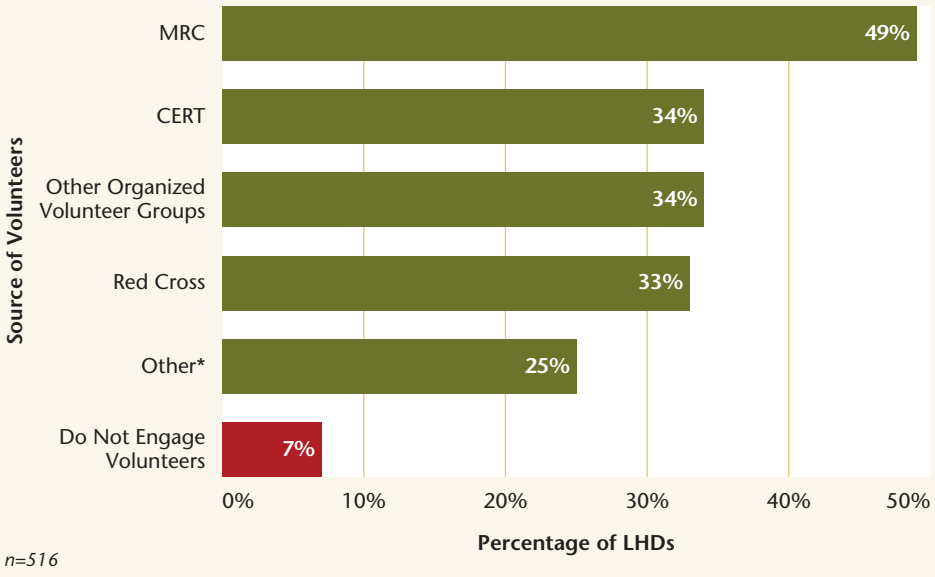


n ranged from 113 to 320
**Since January 2009*

Do LHDs Engage Volunteers for Preparedness Activities? What Are Predominant Sources of Volunteers?

Nearly all LHDs (93%) reported engaging volunteers for preparedness activities. Half of LHDs relied on the Medical Reserve Corps (MRC) for volunteers in an emergency. Community Emergency Response Teams (CERT) were a source of volunteers for one in three LHDs. Roughly an equal proportion looked to the Red Cross for volunteers (Figure 6.11). Overall, 63 percent of LHDs used volunteers from at least one of these three community preparedness groups—CERT, MRC, or American Red Cross—for preparedness activities (data not shown). Seven percent of LHDs did not engage volunteers in preparedness activities.

FIGURE 6.11 | Percentage of LHDs Using Select Sources of Volunteers for Preparedness Activities



n=516

**Refers to volunteer sources other than MRC, CERT, Red Cross, and other organized groups.*

How Many Volunteers Were Registered with LHDs?

Seventy-three percent of LHDs reported that they register volunteers, but only 42 percent of LHDs reported the number of registered volunteers. Figure 6.12 presents the mean and median number of volunteers by size of population served. The median number of volunteers registered with LHDs ranged from 24 for LHDs serving jurisdictions with populations less than 25,000 to 365 for LHDs serving jurisdictions with populations of 500,000 or more. The mean number of registered volunteers was relatively higher, ranging from 57 to 874, respectively.

FIGURE 6.12 | Mean and Median Number of Volunteers, by Size of Population Served

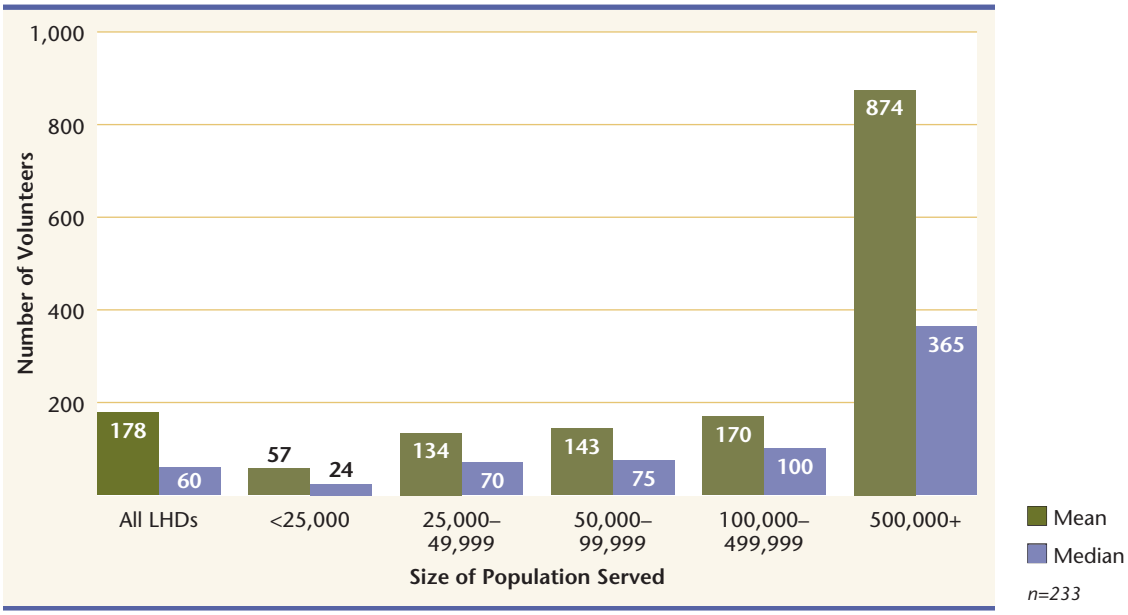
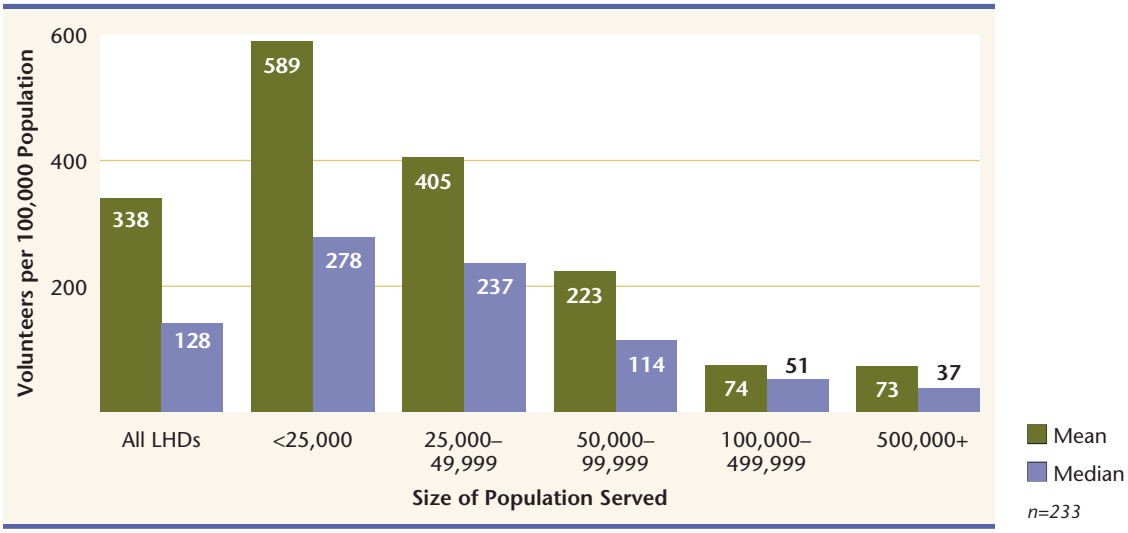


Figure 6.13 shows the mean and median number of volunteers per 100,000 people by the size of the population served in the LHD jurisdiction. The average ratio of registered volunteers to population was much larger for LHDs serving smaller populations than their counterparts serving larger populations. The median number of registered volunteers ranged from 278 per 100,000 people for LHDs serving jurisdictions with populations of less than 25,000 to 37 per 100,000 for LHDs serving jurisdictions with populations of 500,000 or more.

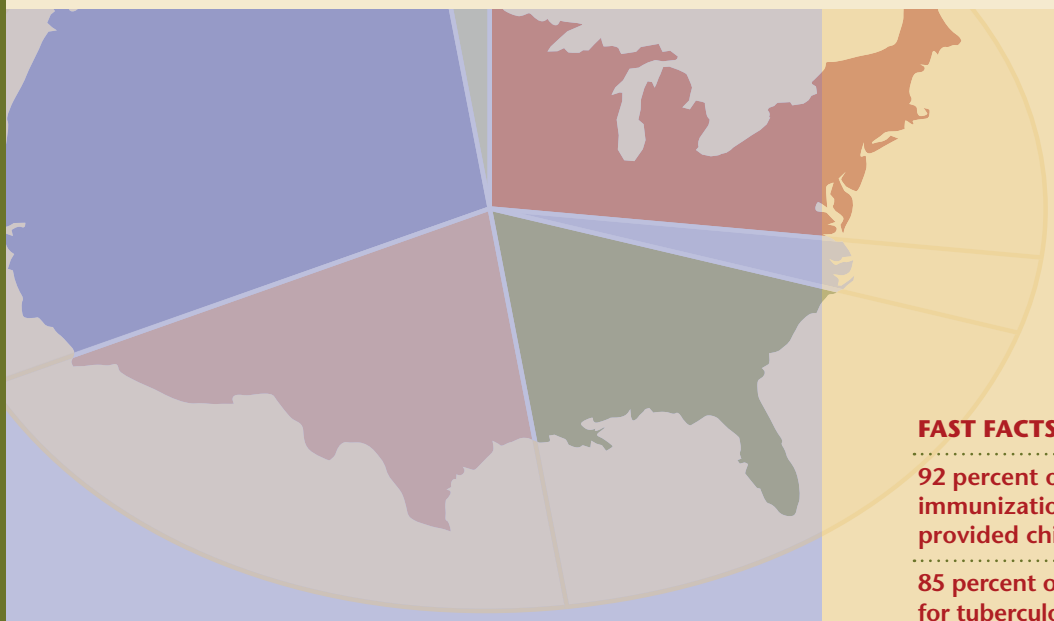
FIGURE 6.13 | Mean and Median Number of Volunteers Per 100,000 Population, by Size of Population Served



CHAPTER 7

LHD Activities

- What Public Health Activities and Services Were Provided Most Often by LHDs and Others?
- What Percentage of LHDs Provided Immunization Services?
- What Percentage of LHDs Provided Screenings for Diseases and Conditions?
- What Percentage of LHDs Provided Treatment for Communicable Diseases?
- What Percentage of LHDs Provided Maternal and Child Health Services?
- What Percentage of LHDs Provided Other Health Services?
- What Percentage of LHDs Provided Primary Prevention Services?
- What Percentage of LHDs Had Epidemiology and Surveillance Activities?
- What Percentage of LHDs Had Environmental Health Activities?
- What Percentage of LHDs Had Regulation, Inspection, or Licensing Activities?
- What Percentage of LHDs Had Other Public Health Activities?



FAST FACTS

92 percent of LHDs provided adult immunizations; 92 percent of LHDs provided childhood immunizations.

85 percent of LHDs provided screening for tuberculosis.

64 percent of LHDs provided WIC services; 55 percent of LHDs provided family planning services.

69 percent of LHDs provided tobacco prevention services.

92 percent of LHDs conducted surveillance and epidemiology for communicable/infectious diseases.

76 percent of LHDs provided food safety education.

Background

The Profile study questionnaire was designed to assess the overall availability of public health activities and services at the local level and identify the types of providers for each. The 2010 questionnaire listed 87 separate activities and services in the following groups: immunization services; screening for diseases and conditions; treatment for communicable diseases; maternal and child health services; other health services; epidemiology and surveillance activities; population-based primary prevention services; regulation, inspection, and licensing activities; other environmental health activities; and other public health activities.

For each activity or service within the LHD jurisdiction, respondents were asked to indicate whether or not the LHD provided each service directly or contracted the service out to external partners. The Profile questionnaire captured information about which public health services are provided by an LHD, but did not capture information about scale or scope of activities.

For each group of activities or services, this chapter includes a table that details the percentage of all LHDs that provided each activity or service, plus a breakdown by jurisdiction population size. The percentages presented in these tables include LHDs that provided the service or activity directly.

FIGURE 7.1 | Percentage of LHDs Providing the 10 Most Frequent Activities and Services Available Through LHDs Directly

Rank	Activity or Service	Percentage of LHDs
1	Adult Immunization Provision	92%
2	Communicable/Infectious Disease Surveillance	92%
3	Child Immunization Provision	92%
4	Tuberculosis Screening	85%
5	Food Service Establishment Inspection	78%
6	Environmental Health Surveillance	77%
7	Food Safety Education	76%
8	Tuberculosis Treatment	75%
9	Schools/Daycare Center Inspection	74%
10	Population-Based Nutrition Services	71%

n ranged from 2,057 to 2,091

FIGURE 7.2 | Percentage of LHDs Providing the 10 Most Frequent Activities and Services Available Through LHDs Contracts

Rank	Activity or Service	Percentage of LHDs
1	Laboratory Services	21%
2	HIV/AIDS Treatment	12%
3	Cancer Screening	11%
4	HIV/AIDS Screening	11%
5	STD Screening	9%
6	Tobacco Prevention	9%
7	Oral Health	9%
8	Tuberculosis Treatment	9%
9	STD Treatment	9%
10	Child Immunization	9%

n ranged from 2,025 to 2,079

What Public Health Activities and Services Were Provided Most Often by LHDs and Others?

Figure 7.1 presents the 10 activities and services most frequently provided directly by LHDs. Immunizations (for adults and children), communicable and infectious disease surveillance, tuberculosis screening, food service establishment inspection, environmental health surveillance, and food safety education were conducted by more than three-fourths of LHDs.

Figure 7.2 presents the 10 activities and services most frequently provided

through LHD contracts with other organizations. Overall, contracts with other organizations were infrequent, with the highest category (laboratory services) contracted out by 21 percent of LHDs.

What Percentage of LHDs Provided Immunization Services?

Overall, 92 percent of LHDs performed adult immunizations and 92 percent performed childhood immunizations (Figure 7.3). For both adult and childhood immunizations, however, the likelihood of providing immunizations generally increased with increasing population size of the jurisdiction served. For adult immunizations, 89 percent of LHDs serving jurisdictions of less than 25,000 performed adult immunizations, whereas 94 percent of LHDs serving populations of 500,000 or more performed adult immunizations. Similarly, 88 percent of LHDs serving jurisdictions of less than 25,000 performed childhood immunizations, whereas 94 percent of LHDs serving populations of 500,000 or more performed childhood immunizations.

FIGURE 7.3 | Percentage of LHDs Providing Adult and Childhood Immunization Services, by Size of Population Served

Immunization Category	All LHDs	<25,000	25,000–49,999	50,000–99,999	100,000–499,999	500,000+
Adult	92%	89%	94%	97%	95%	94%
Child	92%	88%	93%	95%	96%	94%

n ranged from 2,079 to 2,091 (Direct Services only)

What Percentage of LHDs Provided Screenings for Diseases and Conditions?

Most LHDs provided screening for the following five diseases and conditions (Figure 7.4): tuberculosis (85%), high blood pressure (67%), other STDs (64%), blood lead (63%), and HIV/AIDS (62%). With the exceptions of diabetes and high blood pressure, respondents for LHDs serving larger populations were generally more likely to report that screening was provided for the diseases and conditions listed in the questionnaire.

FIGURE 7.4 | Percentage of LHDs Providing Screenings for Select Diseases and Conditions, by Size of Population Served

Disease or Condition	All LHDs	<25,000	25,000–49,999	50,000–99,999	100,000–499,999	500,000+
Tuberculosis	85%	78%	87%	88%	93%	91%
High Blood Pressure	67%	71%	69%	62%	58%	59%
Other STDs	64%	53%	60%	67%	84%	88%
Blood Lead	63%	58%	64%	65%	67%	69%
HIV/AIDS	62%	48%	58%	67%	85%	91%
Diabetes	44%	47%	44%	40%	42%	41%
Cancer	39%	32%	40%	41%	46%	50%
Cardiovascular Disease	33%	30%	34%	35%	36%	38%

n ranged from 2,008 to 2,084 (Direct Services only)

For communicable diseases, however, the likelihood of providing screening services varied considerably by size of the population served by the LHD, with tuberculosis services provided by 78 percent of LHDs serving jurisdictions with populations of less than 25,000 but offered by more than 90 percent of LHDs with populations of 100,000 or more. For HIV/AIDS, the likelihood of screening availability at the LHD almost doubled, from less than 50 percent for jurisdictions with populations less than 25,000 to more than 85 percent among jurisdictions of 100,000 or more.

What Percentage of LHDs Provided Treatment for Communicable Diseases?

Figure 7.5 shows that the percentage of local jurisdictions with LHDs providing treatment for selected communicable diseases varied greatly by disease.

Most LHDs provided treatment for tuberculosis (75%) and STDs (59%). Treatment for HIV/AIDS was offered by 21 percent of LHDs. For all communicable diseases included in the questionnaire, the likelihood that the LHD provided treatment services generally increased with increasing population size of the jurisdiction served.

FIGURE 7.5 | Percentage of LHDs Providing Treatment for Select Communicable Diseases, by Size of Population Served

Communicable Disease	All LHDs	<25,000	25,000–49,999	50,000–99,999	100,000–499,999	500,000+
Tuberculosis	75%	67%	76%	78%	89%	88%
Other STDs	59%	49%	53%	63%	80%	85%
HIV/AIDS	21%	15%	19%	24%	29%	43%

n ranged from 2,029 to 2,071 (Direct Services only)

What Percentage of LHDs Provided Maternal and Child Health Services?

Figure 7.6 shows that most LHDs provided some maternal and child health (MCH) services; specifically, Women, Infants, and Children (WIC) services, MCH home visits, and family planning services. The Early Periodic Screening, Detection, and Treatment (EPSDT) program was offered by 40 percent of LHDs overall. LHDs serving larger jurisdictions were more likely to provide MCH services than were LHDs serving smaller jurisdictions.

FIGURE 7.6 | Percentage of LHDs Providing Select Maternal and Child Health Services, by Size of Population Served

Service	All LHDs	<25,000	25,000–49,999	50,000–99,999	100,000–499,999	500,000+
WIC	64%	58%	63%	66%	74%	78%
MCH Home Visits	61%	55%	61%	66%	68%	76%
Family Planning	55%	50%	55%	58%	60%	70%
EPSDT	40%	38%	42%	41%	42%	48%
Well Child Clinic	36%	31%	34%	42%	42%	39%
Prenatal Care	30%	26%	31%	31%	38%	36%
Obstetrical Care	10%	7%	9%	11%	16%	19%

n ranged from 2,016 to 2,069 (Direct Services only)

What Percentage of LHDs Provided Other Health Services?

Figure 7.7 shows the percentage of local jurisdictions with other health services provided by LHDs. These services included oral health, home healthcare, comprehensive primary care, behavioral/mental health services, and substance abuse services. Oral health services, home healthcare, and comprehensive primary care were the health services offered most frequently, and substance abuse services the least often provided service.

Although 27 percent of all LHDs offered oral health services, the percentage varied widely by size of population served, with 18 percent of LHDs serving populations of less than 25,000 offering oral health services and 59 percent of LHDs serving populations of 500,000 or more offering oral health services. For home healthcare, the pattern was reversed: overall, 25 percent of LHDs offered home healthcare, but LHDs serving populations less than 25,000 were more likely (32%) to offer the service than LHDs serving populations of 500,000 or more (10%).

FIGURE 7.7 | Percentage of LHDs Providing Select Other Health Services, by Size of Population Served

Service	All LHDs	<25,000	25,000–49,999	50,000–99,999	100,000–499,999	500,000+
Oral Health	27%	18%	22%	30%	40%	59%
Home Healthcare	25%	32%	23%	25%	15%	10%
Comprehensive Primary Care	13%	9%	10%	19%	17%	22%
Behavioral/Mental Health Services	10%	6%	8%	13%	14%	28%
Substance Abuse Services	8%	4%	8%	13%	11%	21%

n ranged from 2,028 to 2,045 (Direct Services only)

What Percentage of LHDs Provided Primary Prevention Services?

Figure 7.8 shows the set of population-based primary prevention services listed in the questionnaire and the percentage of LHDs providing each service. The percentage of LHDs providing population-based primary prevention services ranged from 71 percent for nutrition to 13 percent for mental illness. The percentages of LHDs offering any particular preventive service also varied widely by the size of the population served. LHDs serving smaller populations were generally less likely to offer primary preventive services than were LHDs serving larger populations.

FIGURE 7.8 | Percentage of LHDs Providing Select Population-Based Primary Prevention Services, by Size of Population Served

Preventive Focus	All LHDs	<25,000	25,000–49,999	50,000–99,999	100,000–499,999	500,000+
Nutrition	71%	62%	67%	79%	82%	89%
Tobacco	69%	61%	71%	75%	76%	84%
Chronic Disease Programs	55%	46%	56%	60%	66%	77%
Physical Activity	55%	48%	54%	61%	64%	71%
Unintended Pregnancy	51%	43%	49%	53%	64%	72%
Injury	39%	34%	39%	40%	47%	59%
Substance Abuse	27%	20%	33%	32%	29%	30%
Violence	24%	18%	27%	25%	28%	44%
Mental Illness	13%	10%	16%	16%	15%	20%

n ranged from 1,997 to 2,059 (Direct Services only)

What Percentage of LHDs Had Epidemiology and Surveillance Activities?

Figure 7.9 shows the epidemiology and surveillance activities listed in the questionnaire and the percentage of LHDs providing each service. Epidemiology and surveillance for communicable diseases and environmental health were provided by LHDs in more than 75 percent of local jurisdictions.

FIGURE 7.9 | Percentage of LHDs Providing Select Epidemiology and Surveillance Activities, by Size of Population Served

Category	All LHDs	<25,000	25,000–49,999	50,000–99,999	100,000–499,999	500,000+
Communicable/Infectious Disease	92%	87%	93%	94%	98%	97%
Environmental Health	77%	68%	84%	82%	84%	86%
Maternal and Child Health	62%	55%	60%	68%	72%	72%
Syndromic Surveillance	45%	34%	44%	43%	62%	80%
Chronic Disease	41%	34%	41%	40%	50%	60%
Behavioral Risk Factors	36%	29%	38%	41%	42%	52%
Injury Surveillance	26%	21%	24%	24%	33%	50%

n ranged from 2,023 to 2,085 (Direct Services only)

The percentage of LHDs offering surveillance and epidemiology activities ranged from 92 percent (communicable/infectious disease epidemiology) to 26 percent (injury surveillance). Syndromic surveillance showed the greatest difference by size of population served, with the service provided by LHDs in 34 percent of the smallest LHDs and 80 percent of the largest LHDs.

What Percentage of LHDs Had Environmental Health Activities?

Figure 7.10 shows the environmental health activities listed in the questionnaire and the percentage of LHDs providing each activity. Food safety education and vector control service were provided by LHDs in more than half of all jurisdictions.

The percentage of LHDs offering environmental health services ranged from 76 percent (food safety education) to 13 percent (radiation control service). For environmental health activities, the smallest LHDs were generally less likely to provide these services than were the largest LHDs.

FIGURE 7.10 | Percentage of LHDs Providing Select Environmental Health Activities, by Size of Population Served

Service	All LHDs	<25,000	25,000–49,999	50,000–99,999	100,000–499,999	500,000+
Food Safety Education	76%	67%	82%	80%	84%	75%
Vector Control	52%	43%	58%	57%	61%	61%
Groundwater Protection	43%	35%	44%	48%	51%	51%
Surface Water Protection	36%	30%	37%	41%	41%	42%
Indoor Air Quality	32%	29%	33%	35%	33%	40%
Pollution Prevention	25%	20%	25%	31%	27%	34%
Land Use Planning	21%	17%	24%	26%	23%	22%
Hazmat Response	19%	16%	18%	21%	21%	27%
Air Pollution	17%	15%	17%	18%	18%	28%
Hazardous Waste Disposal	17%	17%	15%	15%	16%	25%
Collection of Unused Pharmaceuticals	15%	15%	17%	17%	13%	16%
Noise Pollution	14%	12%	15%	14%	13%	21%
Radiation Control	13%	11%	15%	12%	12%	20%

n ranged from 2,008 to 2,073 (Direct Services only)

What Percentage of LHDs Had Regulation, Inspection, or Licensing Activities?

Figure 7.11 shows the regulatory, inspection, and licensing activities listed in the questionnaire and the percentage of LHDs providing each activity. The percentage of LHDs offering regulatory, inspection, or licensing services ranged from 78 percent (food service establishments) to 12 percent (milk processing). For regulation of food service establishments, schools/daycare centers, septic systems, and private drinking water, LHDs serving the smallest and largest population groups (populations less than 25,000 or populations of 500,000 or more) were less likely to provide the service than LHDs serving mid-sized populations (populations between 25,000 and 499,999).

FIGURE 7.11 | Percentage of LHDs Providing Select Regulation, Inspection, and/or Licensing Activities, by Size of Population Served

Area of Regulation, Inspection, and/or Licensing Activities	All LHDs	<25,000	25,000–49,999	50,000–99,999	100,000–499,999	500,000+
Food Service Establishments	78%	68%	84%	86%	86%	79%
Schools/Daycares	74%	68%	77%	77%	83%	71%
Public Swimming Pools	70%	59%	75%	78%	80%	77%
Septic Systems Regulation	68%	62%	67%	72%	78%	70%
Smoke–Free Ordinances	61%	54%	61%	66%	70%	76%
Private Drinking Water	59%	54%	63%	62%	67%	51%
Body Art	55%	46%	60%	63%	61%	56%
Children's Camps	54%	44%	58%	64%	64%	48%
Hotels/Motels	52%	48%	57%	59%	55%	41%
Lead Inspection	48%	36%	52%	56%	56%	68%
Campgrounds & RVs	41%	31%	43%	51%	53%	47%
Public Drinking Water	35%	30%	34%	39%	44%	43%
Health–Related Facilities	33%	29%	38%	37%	30%	35%
Food Processing	31%	30%	33%	37%	29%	28%
Solid Waste Disposal Sites	30%	28%	28%	30%	33%	39%
Housing Inspections	30%	28%	32%	32%	28%	27%
Mobile Homes	30%	22%	31%	39%	36%	34%
Solid Waste Haulers	28%	26%	29%	27%	33%	31%
Tobacco Retailers	27%	25%	31%	27%	27%	35%
Cosmetology Businesses	13%	13%	13%	17%	12%	8%
Milk Processing	12%	12%	12%	10%	11%	12%

n ranged from 1,987 to 2,070 (Direct Services only)

What Percentage of LHDs Had Other Public Health Activities?

LHD activity in the area of other public health activities is described in Figure 7.12. The percentage of LHDs providing vital records was 54 percent. Except for vital records, none of the other public health activities was provided by more than 50 percent of LHDs. After vital records, outreach and enrollment for medical insurance (including Medicaid), school-based clinics, and school health were the next three leading LHD activities within this group of activities.

FIGURE 7.12 | Percentage of LHDs Providing Select Other Public Health Activities, by Size of Population Served

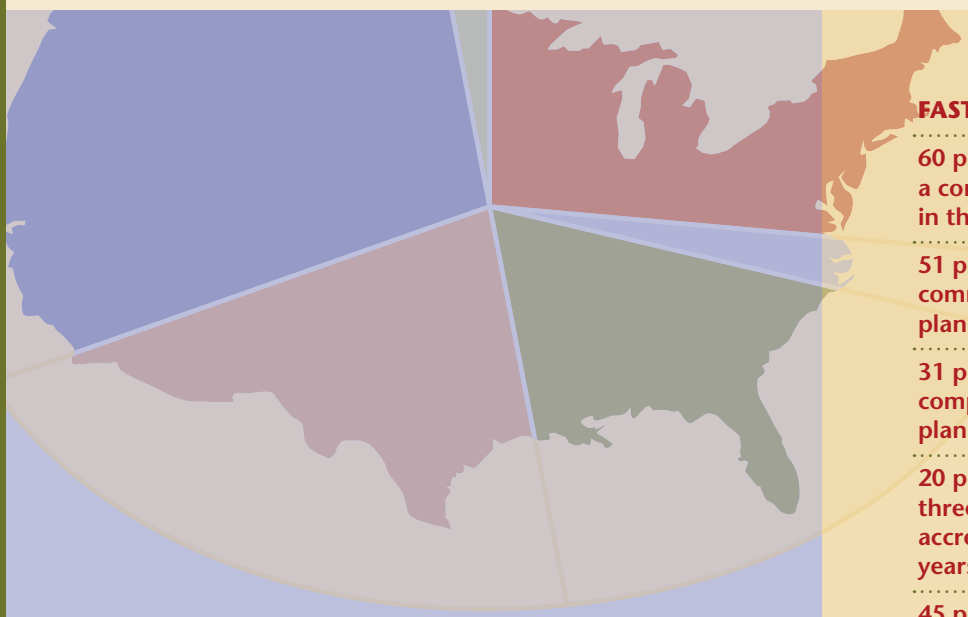
Service	All LHDs	<25,000	25,000–49,999	50,000–99,999	100,000–499,999	500,000+
Vital Records	54%	43%	57%	59%	65%	69%
Outreach and Enrollment for Medical Insurance (including Medicaid)	49%	44%	51%	51%	55%	61%
School–Based Clinics	39%	46%	42%	33%	29%	32%
School Health	38%	36%	39%	37%	37%	44%
Laboratory Services	30%	22%	24%	29%	46%	61%
Asthma Prevention and/or Management	23%	17%	21%	29%	29%	46%
Animal Control	18%	14%	21%	26%	16%	17%
Correctional Health	13%	12%	12%	13%	13%	25%
Veterinarian Public Health	12%	9%	12%	15%	14%	24%
Occupational Safety and Health	12%	9%	14%	15%	11%	22%
Emergency Medical Services	4%	3%	3%	6%	6%	15%
Medical Examiner's Office	4%	1%	3%	5%	7%	11%

n ranged from 2,004 to 2,056 (Direct Services only)

CHAPTER 8

Community Health Assessment and Quality Improvement

- Did LHDs Participate in Community Health Assessment (CHA) and Community Health Improvement Planning (CHIP)?
- Did CHA and CHIP Activities Differ According to the Size of the Population Served by the LHD?
- Did LHDs Participate in Internal Agency Strategic Planning?
- Did LHD Internal Agency Strategic Planning Differ According to the Size of the Population Served by the LHD?
- What Proportion of LHDs Have Completed a CHA, CHIP, and Internal Agency Strategic Plan within the Past Five Years?
- Did LHDs Participate in Quality Improvement Activities?
- How Many Formal Quality Improvement Projects Have LHDs Implemented?
- What Frameworks or Approaches Did LHDs Use for Quality Improvement?
- Have LHD Staff Members Received Formal Training in Quality Improvement?
- Were Respondents Aware of the Developing Voluntary National Accreditation Program?
- What Was the Interest Level in LHD Accreditation?
- Did Interest in a Voluntary National Accreditation Program Differ by the Size of the Population Served by the LHD?



FAST FACTS

60 percent of LHDs completed a community health assessment in the past five years.

51 percent of LHDs participated in community health improvement planning in the past five years.

31 percent of LHDs developed a comprehensive, agency-wide strategic plan in the past five years.

20 percent of LHDs completed all three of these pre-requisites for accreditation within the past five years.

45 percent of LHDs reported formal QI activities; 15 percent of LHDs reported agency-wide QI efforts.

50 percent of LHDs expressed interest in seeking national accreditation; 29 percent within the first two years of the program.

Background

To study LHDs and community health planning, the 2010 Profile core questionnaire included items on community health assessments (CHAs) and community health improvement planning (CHIP). Additionally, a supplemental module included a random sample of LHDs addressed internal strategic planning, quality improvement, and awareness of and interest in seeking national accreditation. These topics are included in a single chapter because community health assessment and planning, internal strategic planning, and quality improvement are all requirements for achieving accreditation under standards set by the Public Health Accreditation Board. The 2010 Profile questionnaire defined quality improvement as "a *formal, systematic* approach (such as plan-do-check-act) applied to the processes underlying public health programs and services in order to achieve *measurable* improvements."

FIGURE 8.1 | Percentage Distribution of LHDs, by Participation in Community Health Assessment

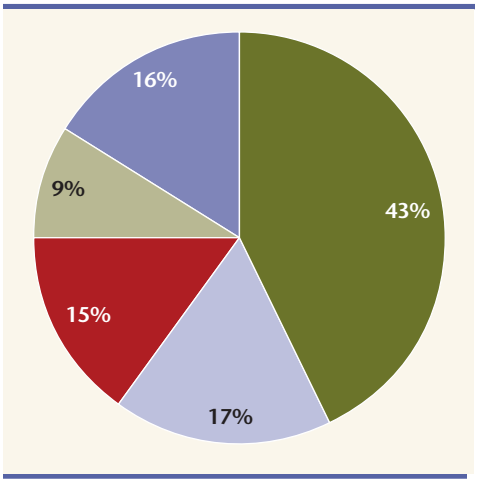
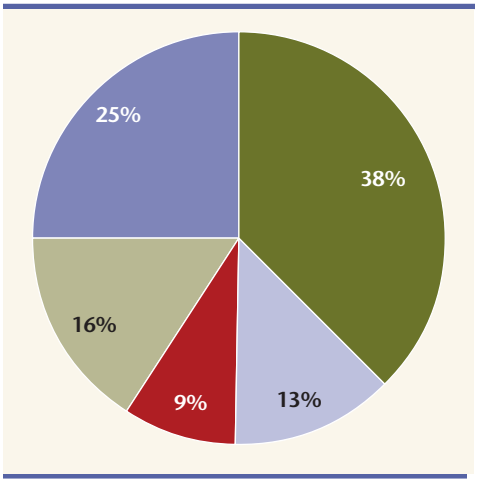


FIGURE 8.2 | Percentage Distribution of LHDs, by Participation in Community Health Improvement Planning



Did LHDs Participate in Community Health Assessment (CHA) and Community Health Improvement Planning (CHIP)?

Three-quarters of respondents reported that a CHA had been completed at some time for their jurisdiction; 60 percent had completed a CHA in the last five years; 43 percent had completed a CHA in the last three years (Figure 8.1). Sixty percent of respondents reported participation in CHIP for their jurisdiction at some time; 51 percent participated in CHIP in the last five years; 38 percent participated in CHIP in the last three years (Figure 8.2). For both CHA and CHIP, most LHDs that participated in these activities reported doing so at a frequency of three years or less, but significant percentages of LHDs participate in both of these activities on a less frequent (or longer-term) basis.

Did CHA and CHIP Activities Differ According to the Size of the Population Served by the LHD?

LHD participation in CHAs and CHIP varied by the size of the population served by the LHD (Figure 8.3). The greatest difference was between LHDs serving jurisdictions with populations of less than 25,000 and LHDs serving larger populations. Participation in CHAs within the past three years ranged from a low of 35 percent among LHDs serving jurisdictions with populations less than 25,000 to a high of 61 percent among LHDs serving jurisdictions with populations of 500,000 or more. Participation in CHIP in the past three years ranged from a low of 32 percent among LHDs serving jurisdictions with populations less than 25,000 to 48 percent among LHDs serving jurisdictions of 500,000 or more. Within each population category, CHAs were more likely to be reported than CHIP, suggesting a gap between the ability to assess community health and the ability to engage the resources necessary for a community health improvement planning effort.

FIGURE 8.3 | Percentage of LHDs with Community Health Assessment and Community Health Improvement Planning Activities, by Size of Population Served

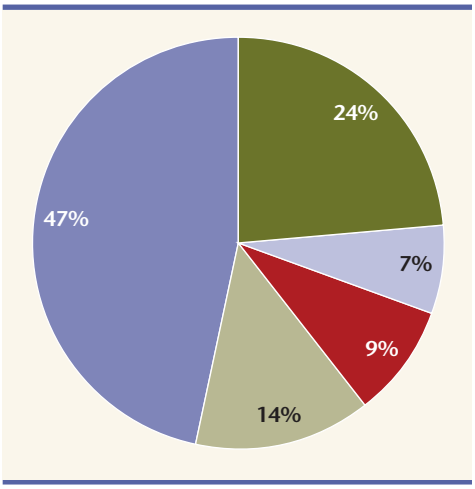
Activity	All LHDs	<25,000	25,000–49,999	50,000–99,999	100,000–499,999	500,000+
Community Health Assessment (CHA)						
Ever Completed CHA	75%	68%	81%	77%	80%	87%
Completed CHA in Past Three Years	43%	35%	47%	44%	49%	61%
Community Health Improvement Planning (CHIP)						
Ever Participated in CHIP	59%	54%	65%	60%	62%	63%
Participated in CHIP in Past Three Years	38%	32%	42%	37%	42%	48%

n ranged from 2,082 to 2,091

Did LHDs Participate in Internal Agency Strategic Planning?

Forty percent of LHDs reported developing a comprehensive, agency-wide strategic plan at some time, and 24 percent of LHDs reported developing such a plan within the past three years (Figure 8.4). An additional 14 percent of LHDs reported that they have not developed a comprehensive agency-wide strategic plan but plan to do so within the next year.

FIGURE 8.4 | Percentage Distribution of LHDs, by Development of Internal Agency Strategic Plan



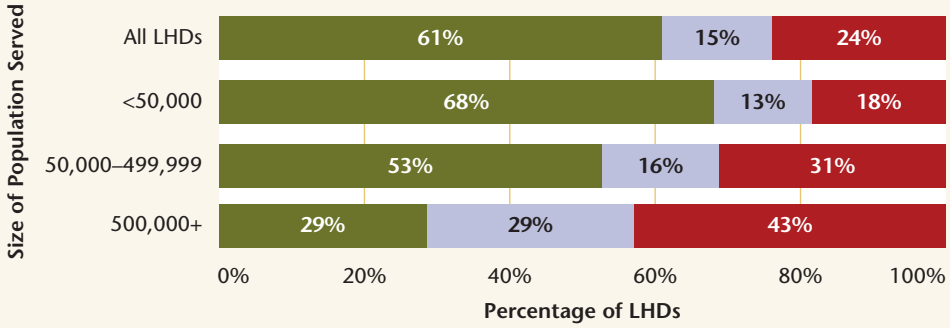
n=519

Note: Due to rounding, percentages do not add to 100%.

Did LHD Internal Agency Strategic Planning Differ According to the Size of the Population Served by the LHD?

LHD internal strategic planning varied greatly by size of population served, with much higher percentages of LHDs serving jurisdictions of 500,000 or more reporting conducting comprehensive, agency-wide strategic planning than LHDs serving smaller jurisdictions (Figure 8.5). Among LHDs serving jurisdictions of 500,000 or more, 72 percent reported developing an agency-wide strategic plan at some time, and 43 percent reported developing such a plan within the past three years. Among LHDs serving jurisdictions of 50,000 or less, 31 percent reported developing an agency-wide strategic plan at some point, and 18 percent reported developing such a plan within the past three years.

FIGURE 8.5 | Percentage Distribution of LHDs' Development of Agency-Wide Strategic Plan, by Size of Population Served



n=519

Note: Due to rounding, percentages do not add to 100%.

What Proportion of LHDs Have Completed a CHA, CHIP, and Internal Agency Strategic Plan within the Past Five Years?

The Public Health Accreditation Board has established certain requirements for LHDs that wish to seek voluntary national accreditation, including completion of a CHA, CHIP, and internal agency strategic plan within the five years prior to application. Twenty percent of all LHDs reported meeting these requirements (Figure 8.6). The percentages of LHDs that have met these three requirements varies by size of population served, with a high of 32 percent of LHDs serving populations of 500,000 or more reporting that they had completed all three processes within the past five years.

FIGURE 8.6 | Percentage of LHDs Completing Community Health Assessment, Community Health Improvement Plan, and Internal Agency Strategic Plan Within Past Five Years, by Size of Population Served

Did LHDs Participate in Quality Improvement Activities?

Profile respondents were asked to characterize their LHD's current quality improvement (QI) efforts using four categories: formal, agency-wide QI program; formal QI program in specific areas but not agency-wide; informal or ad hoc QI activities; not currently involved in QI activities. Fifteen percent of LHDs reported implementing an agency-wide, formal QI program, and 30 percent of LHDs reported implementing formal QI activities in specific areas (Figure 8.7). Thirty-nine percent of LHDs characterized their QI activities as informal or ad hoc. Engagement in QI activities showed marked differences by size of the population served by the LHD. Three-quarters of LHDs serving populations of 500,000 or more reported formal QI programs (either agency-wide or programmatic), compared to 39 percent of LHDs serving populations less than 50,000.

FIGURE 8.7 | Percentage Distribution of LHDs' Level of Quality Improvement Implementation, by Size of Population Served

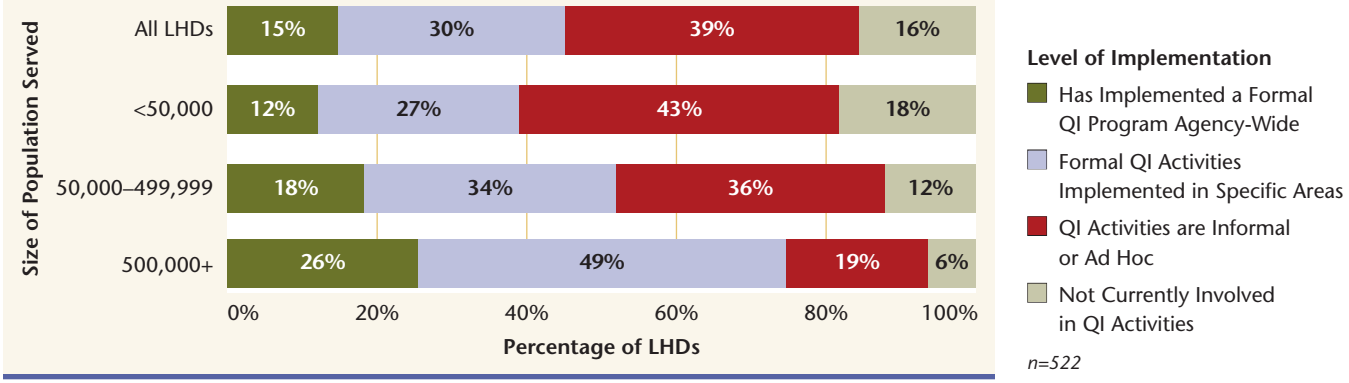
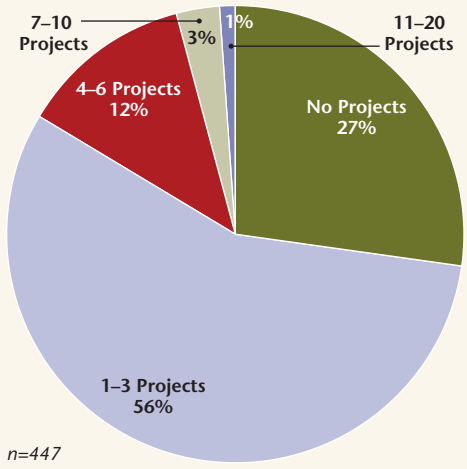


FIGURE 8.8 | Percentage Distribution of LHDs, by Number of Formal QI Projects Implemented in Past 12 Months*



n=447
**Among LHDs engaged in QI activities.*
Note: Due to rounding, percentages do not add to 100%.

How Many Formal Quality Improvement Projects Have LHDs Implemented?

Most LHDs that reported QI activities (formal or informal) reported undertaking between one and three formal QI projects during the past 12 months (Figure 8.8). For the purpose of the Profile survey, a formal QI project was defined as "a systematic QI initiative that includes an aim statement; a workplan with tasks, responsibilities, and timelines; intervention strategies; and measures for tracking change." Twenty-seven percent of LHDs reported no formal QI projects, and four percent of LHDs reported seven or more formal QI projects during the past 12 months.

What Frameworks or Approaches Did LHDs Use for Quality Improvement?

A 2010 Profile module question listed several frameworks or approaches to quality or performance improvement and asked respondents to indicate any that had been used at the LHD during the past year (Figure 8.9). Among LHDs that reported any QI efforts (formal or informal) in the past two years, 39 percent indicated using at least one QI framework, with plan-do-check-act being by far the most commonly used framework (31% of LHDs engaged in QI). LHDs that characterized their QI activities as formal were much more likely to use a specific framework than LHDs with informal QI activities (56% of LHDs with formal QI activities versus 19% of LHDs with informal QI activities).

FIGURE 8.9 | Percentage of LHDs Using Select Framework for Quality Improvement Over Past Year, by Level of QI Implementation*

		QI Implementation	
	All LHDs	Formal QI	Informal QI
Plan-Do-Check-Act	31%	44%	15%
Balanced Scorecard	8%	13%	2%
Lean	5%	7%	3%
Baldrige (or State Version)	3%	5%	0%
Other Framework	3%	4%	1%
Six Sigma	1%	2%	0%
No Specific Framework	61%	44%	81%

n=432
**Among LHDs engaged in QI activities.*

Have LHD Staff Members Received Formal Training in Quality Improvement?

Among LHDs with any QI activities, 57 percent reported that between 1 and 25 percent of their staff had received formal QI training, and 17 percent reported that more than 25 percent of their staff had received formal QI training (Figure 8.10). LHDs serving larger jurisdictions and those that reported formal QI activities were more likely to report that some of their staff had received formal QI training.

FIGURE 8.10 | Percentage of LHDs Where Proportion of Staff Received Formal QI Training in Past Two Years, by Size of Population Served and Level of QI Implementation*

		Size of Population Served			QI Implementation	
	All LHDs	<50,000	50,000–499,999	500,000+	Formal QI	Infomal QI
None	26%	32%	18%	10%	14%	41%
1–25%	57%	51%	64%	74%	61%	52%
More than 25%	17%	17%	18%	16%	25%	7%

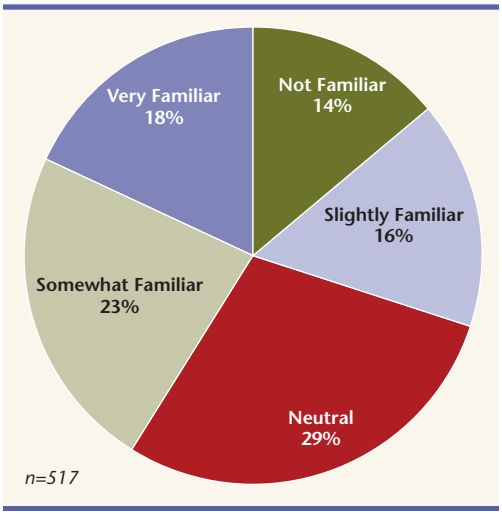
n=442
**Among LHDs engaged in QI activities.*

Were Respondents Aware of the Developing Voluntary National Accreditation Program?

A 2010 Profile module included an item on awareness of the Public Health Accreditation Board's developing voluntary national accreditation program for state and local health departments.

Of the respondents, 14 percent were unfamiliar and 16 percent were slightly familiar, 23 percent were somewhat familiar, and 18 percent were very familiar with the voluntary national accreditation program (Figure 8.11). The largest category was neutral (29%).

FIGURE 8.11 | Percentage Distribution of LHDs, by Familiarity with Voluntary National Accreditation Program

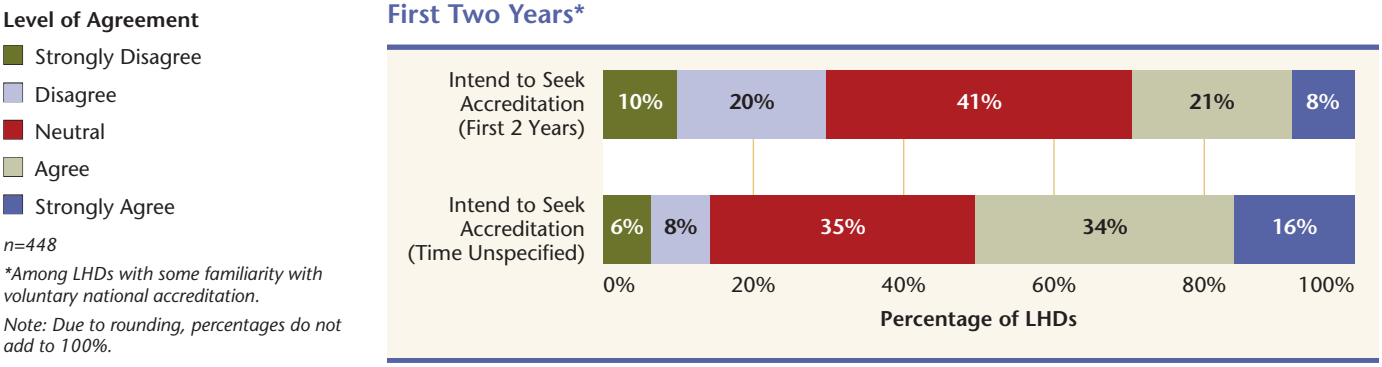


What Was the Interest Level in LHD Accreditation?

A 2010 Profile questionnaire module also included two questions concerning the level of agreement by the respondent with a statement about whether the LHD would seek accreditation under the voluntary national accreditation program in an unspecified timeframe, and within the first two years of the program (2011–2012). Figure 8.12 shows responses among those who indicated at least some awareness of a voluntary national accreditation program.

Overall, 50 percent of respondents agreed or strongly agreed that their LHD would seek accreditation in an unspecified time period; 29 percent intended to seek accreditation within the first two years of the program (Figure 8.12). About 14 percent disagreed or strongly disagreed that their LHD would seek accreditation in an unspecified time period.

FIGURE 8.12 | Percentage Distribution of LHDs' Level of Agreement with Statements on Seeking Voluntary National Accreditation, Overall and Within First Two Years*



n=448

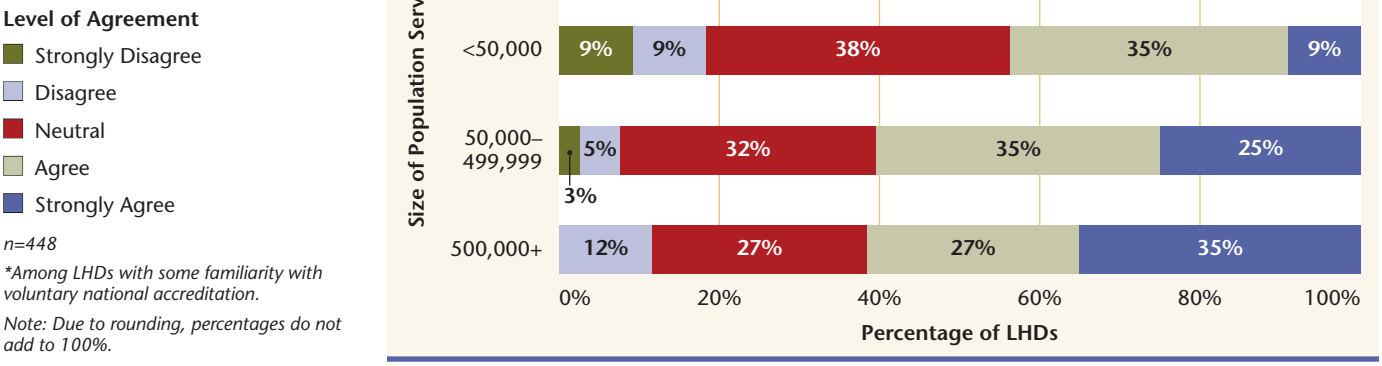
**Among LHDs with some familiarity with voluntary national accreditation.*

Note: Due to rounding, percentages do not add to 100%.

Did Interest in a Voluntary National Accreditation Program Differ by the Size of the Population Served by the LHD?

Figure 8.13 shows the level of agreement with a statement on seeking voluntary national accreditation in an unspecified time by the size of the population served by the LHD. Thirty-five percent of the respondents for LHDs serving large populations strongly agreed with a statement on seeking accreditation, 25 percent of the respondents for LHDs serving mid-sized populations strongly agreed, and 9 percent of the respondents for smaller LHDs strongly agreed.

FIGURE 8.13 | Percentage Distribution of LHDs' Level of Agreement with Statement on Seeking Voluntary National Accreditation in Unspecified Time, by Size of Population Served*



n=448

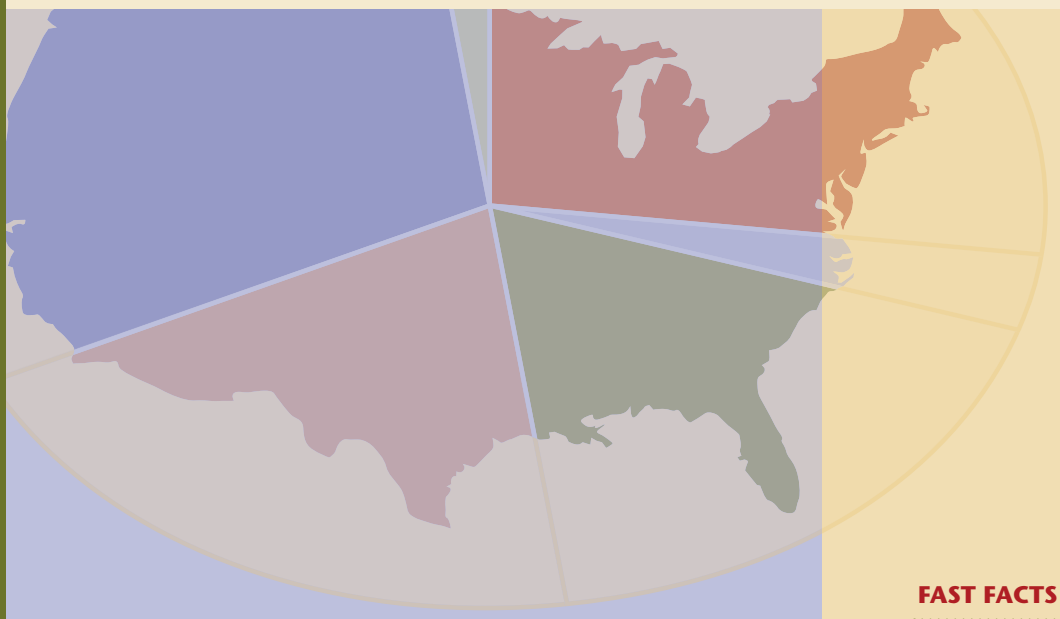
**Among LHDs with some familiarity with voluntary national accreditation.*

Note: Due to rounding, percentages do not add to 100%.

CHAPTER 9

Policy and Advocacy

- What Were LHD Activities Regarding Public Health Policy?
- In What Policy or Advocacy Activities Were LHDs Actively Involved?
- What Percentage of LHDs Had a New Local Public Health Ordinance or Regulation Adopted?
- What Were LHD Activities to Assure Access to Healthcare Services?
- What Percentage of LHDs Have Ever Participated in Health Impact Assessments?
- What Types of Arrangements Did LHDs Have for Legal Counsel?
- What Services Did the Legal Counsel Provide to LHDs?



FAST FACTS

64 percent of LHDs were actively involved in tobacco policy or advocacy.

65 percent of LHDs targeted the healthcare needs of the underserved population.

66 percent of LHDs have attorneys or legal counsel assigned by local government.

76 percent of LHDs had legal counsel to represent the LHD in all legal matters.

82 percent of LHDs communicated with policymakers regarding proposed legislation, regulations, or ordinances.

69 percent had never participated in a health impact assessment.

Background

The 2010 Profile questionnaire included a set of detailed questions regarding LHD policymaking and advocacy, access to healthcare services, health impact assessments, and public health and the law. These questions were placed in a module added to the questionnaire for a random sample of LHDs; the module provided all data reported in this chapter.

What Were LHD Activities Regarding Public Health Policy?

The Profile questionnaire included a series of detailed questions on LHD activities regarding policymaking and advocacy.

More than 80 percent of all LHDs communicated with legislators and other policymakers regarding proposed legislation, regulations, and ordinances (Figure 9.1). Other policymaking and advocacy activities included participating on a board or advisory panel (67%), preparing issue briefs (58%), presenting public testimony (53%), and providing technical assistance (49%). LHDs serving larger populations were more likely to report policymaking and advocacy activities than were those serving smaller populations. LHDs that were units of local government or shared governance were more likely to report policymaking and advocacy activities than were LHDs that were units of state health agencies.

FIGURE 9.1 | Percentage of LHDs with Select Policymaking and Advocacy Activities, by Size of Population Served and Type of Governance

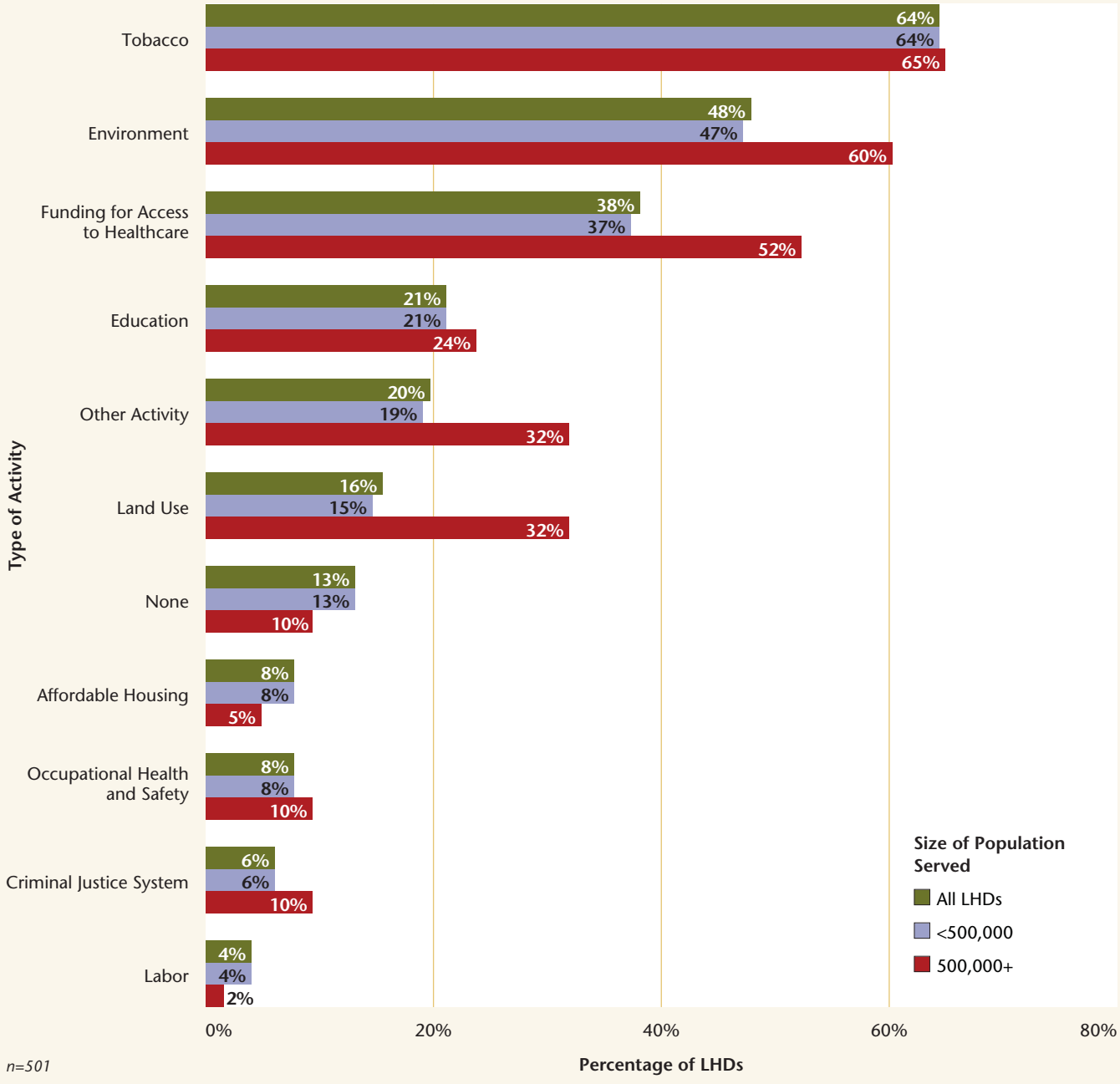
		Size of Population Served		Type of Governance		
Activity	All LHDs	<500,000	500,000+	Local Government	State Health Agency	Shared Governance
Communicated with Legislators, Regulatory Officials, or Other Policymakers Regarding Proposed Legislation, Regulations, or Ordinances	82%	82%	87%	88%	52%	96%
Participated on a Board or Advisory Panel Responsible for Public Health Policy	67%	66%	90%	74%	42%	66%
Prepared Issue Briefs for Policymakers	58%	57%	84%	65%	33%	49%
Gave Public Testimony to Policymakers	53%	52%	79%	59%	29%	50%
Provided Technical Assistance to Legislative, Regulatory, or Advocacy Group for Drafting Proposed Legislation, Regulations, or Ordinances	49%	47%	78%	54%	32%	39%

n ranged from 496 to 505

In What Policy or Advocacy Activities Were LHDs Actively Involved?

More than 60 percent of all LHDs reported policy or advocacy activities targeting tobacco and nearly half reported such activities regarding the environment. With the exception of activities concerning labor and affordable housing, LHDs serving larger populations were more likely to report active involvement in policy or advocacy activities than were LHDs serving smaller populations (Figure 9.2).

FIGURE 9.2 | Percentage of LHDs Actively Involved in Select Policy or Advocacy Activities in Past Two Years, by Size of Population Served



What Percentage of LHDs Had a New Local Public Health Ordinance or Regulation Adopted?

Nearly half of all LHDs (56%) reported that a new local public health ordinance or regulation was adopted in the jurisdiction during the previous two years. New ordinances or regulations in tobacco prevention and control were those most frequently reported by the LHDs (31%). The remaining areas of regulation were adopted much less frequently (Figure 9.3).

FIGURE 9.3 | Percentage of LHDs with Select New Local Public Health Ordinance or Regulation Adopted in Jurisdiction in Past Two Years, by Size of Population Served and Type of Governance

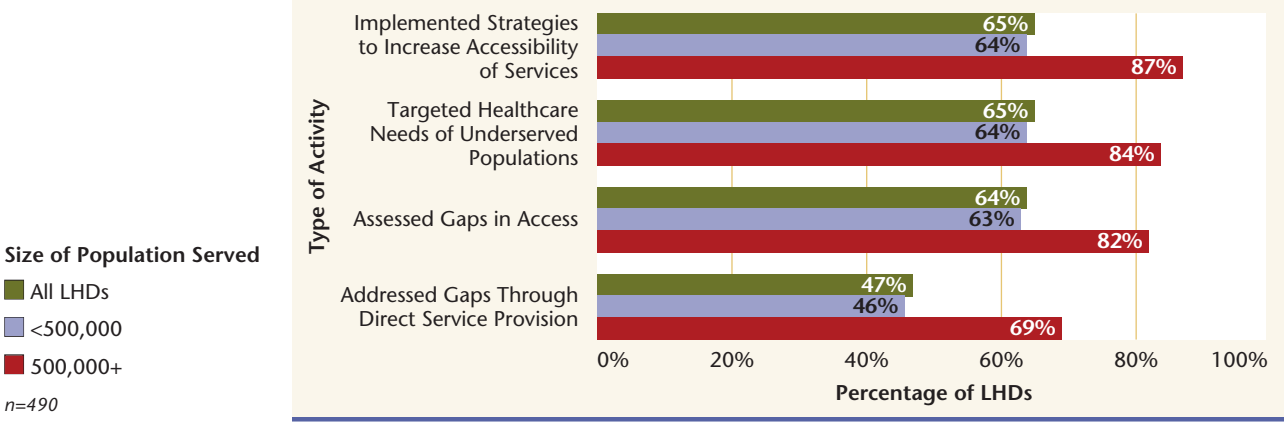
		Size of Population Served		Type of Governance		
Public Health Ordinance/Regulation	All LHDs	<500,000	500,000+	Local Government	State Health Agency	Shared Governance
Indoor Air Quality	4%	4%	10%	4%	6%	5%
Nutrition or Physical Activity	5%	4%	18%	4%	9%	3%
Some Other Area	12%	11%	18%	15%	1%	11%
Emergency Preparedness and Response	12%	12%	12%	13%	11%	10%
Tobacco Prevention and Control	31%	31%	38%	29%	39%	37%
None	44%	45%	25%	42%	51%	49%

n=462

What Were LHD Activities to Assure Access to Healthcare Services?

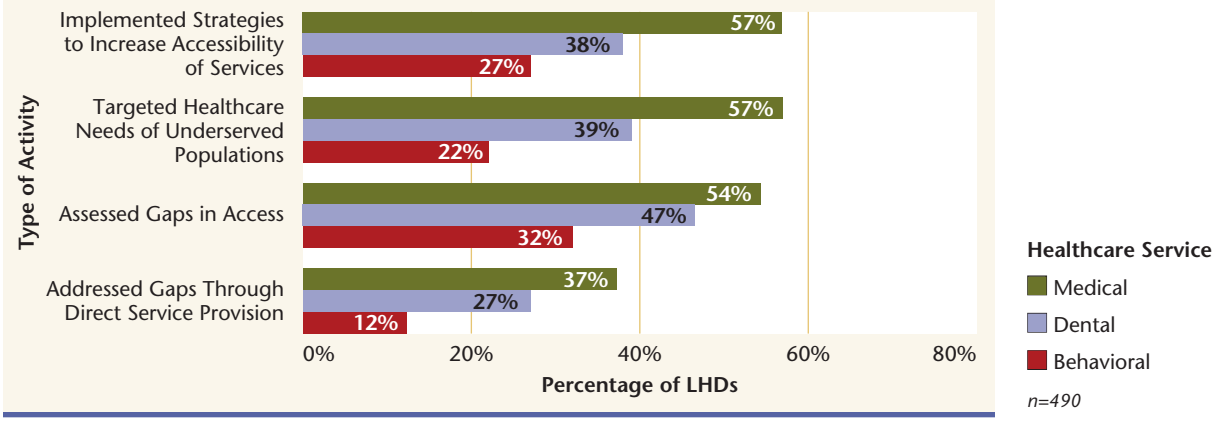
Most LHDs were actively involved in assuring access to one or more healthcare services within the LHD jurisdiction whether by assessing gaps in access (64%), implementing strategies to increase accessibility of services (65%), or targeting healthcare needs of underserved populations (65%). LHDs serving jurisdictions with larger populations were more likely to engage in activities to promote access to one or more healthcare services than were those with smaller populations (Figure 9.4).

FIGURE 9.4 | Percentage of LHDs That Participated in Select Activities to Assure Access to Healthcare Services, by Size of Population Served



LHDs were more likely to participate in activities to assure access to medical care services and least likely to participate in activities to assure access to behavioral care services (Figure 9.5). For example, 57 percent of LHDs reported targeting the medical needs of underserved populations, whereas 39 percent targeted the dental needs of underserved populations and 22 percent targeted behavioral needs of underserved populations.

FIGURE 9.5 | Percentage of LHDs That Participated in Select Activities to Assure Access to Healthcare Services, by Specific Healthcare Service



What Percentage of LHDs Have Ever Participated in Health Impact Assessments?

Most LHDs (69%) reported never participating in a health impact assessment (HIA) (Figure 9.6). When asked how many HIAs the LHD had conducted or been a part of in the past year, 4 percent of all LHDs reported participating in one assessment, whereas another 1 percent reported participating in two to four assessments. LHDs serving jurisdictions with larger populations were more likely to have participated in HIAs in the past year, with 26 percent having participated in one to four assessments during this timeframe (Figure 9.7).

FIGURE 9.6 | Percentage Distribution of LHDs, by Participation (Ever) in a Health Impact Assessment

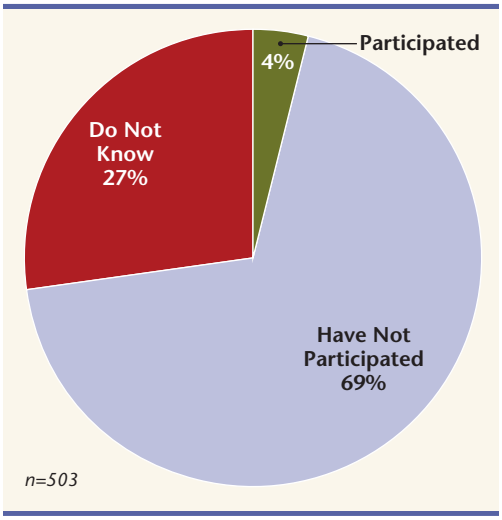


FIGURE 9.7 | Number of Health Impact Assessments in Which LHD Participated in Past Year, by Size of Population Served

	All LHDs	<50,000	50,000–499,999	500,000+
None	95%	98%	92%	74%
1	4%	2%	6%	13%
2–4	1%	0%	1%	13%
5–10	0%	0%	1%	0%

n=365 (Omits LHDs who responded "do not know" to question about ever participating in HIA. This likely produces inflated estimates of percentages of LHDs involved in HIA in past year.)

What Types of Arrangements Did LHDs Have for Legal Counsel?

Most LHDs (66%) reported working with attorneys and legal staff assigned by local government (Figure 9.8). The next two highest but much less frequently reported arrangements for legal counsel were LHDs working with attorneys and legal staff assigned by the state health agency (23%) and contracting with outside attorneys and legal staff (15%). LHDs serving jurisdictions with larger populations (500,000+) were somewhat more likely to work with legal counsel assigned by local government (70%) or employ their own attorneys and legal staff (19%) than LHDs serving smaller populations, but were less likely to work with legal counsel assigned by the state health agency.

FIGURE 9.8 | Percentage of LHDs Reporting Select Arrangements for Legal Counsel, by Size of Population Served

Legal Counsel Arrangement	All LHDs	<50,000	50,000–499,999	500,000+
Attorneys and Legal Staff Assigned by Local Government	66%	64%	68%	70%
Attorneys and Legal Staff Assigned by State Health Agency	23%	23%	24%	17%
Contracts with Outside Attorneys and Legal Staff	15%	12%	18%	16%
Employs Own Attorneys and Legal Staff	9%	7%	11%	19%
Attorneys and Legal Staff Assigned by State Attorney General	9%	6%	14%	9%
Other Arrangement	4%	5%	3%	2%
No Legal Staff	1%	2%	1%	0%

n=513

What Services Did the Legal Counsel Provide to LHDs?

Figure 9.9 shows the types of services provided to LHDs by legal counsel. More than three-quarters of LHDs reported representation by legal counsel in all legal matters pertaining to the organization's activities and 71 percent reported receiving informal advice on the legality and constitutionality of various laws, statutes, regulations, enforcement policies, and enforcement actions. LHDs serving larger jurisdictions (500,000+) were more likely to report receiving these legal services, with 92 percent reporting representation by legal counsel in all legal matters.

FIGURE 9.9 | Percentage of LHDs Reporting Provision of Specific Services by Legal Counsel, by Size of Population Served

Services	All LHDs	<50,000	50,000–499,999	500,000+
Represents LHD in All Legal Matters Pertaining to LHD's Activities	76%	70%	84%	92%
Informally Advises Us on Legality/Constitutionality of Legal Matters*	71%	69%	72%	87%
Provides Formal Opinions on Legal Matters*	66%	56%	81%	86%
Assists in Drafting Legal Matters*	55%	47%	64%	86%
Determines Which Entities to Litigate or Prosecute for Violations of Statutes, Regulations, Ordinances	45%	42%	48%	60%

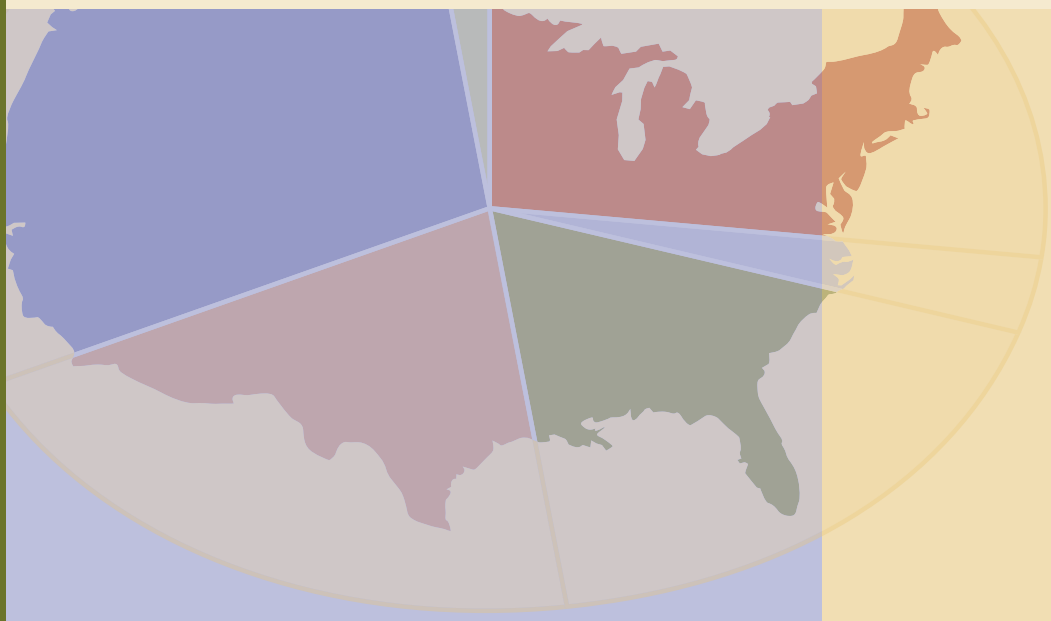
n=513

**Legal matters includes laws, statues, regulations, enforcement policies, and enforcement actions.*

CHAPTER 10

Information Technology

- What Kinds of Information Systems Did LHDs Use?
- Did LHDs Use Electronic Surveillance Systems?
- For What Activities Did LHDs Use Electronic Syndromic Surveillance Systems?
- Which of the Web 2.0 Technologies Are Used by LHDs?
- What Percentage of LHDs Have Public Health Informatics Specialists?



FAST FACTS

34 percent of LHDs either have electronic health records or plan to implement electronic health records.

28 percent of LHDs use Facebook and 13 percent use Twitter.

75 percent of LHDs have electronic immunization registries.

56 percent of LHDs used an electronic syndromic surveillance system.

89 percent of LHDs with an electronic surveillance system use it to detect influenza-like illness.

Background

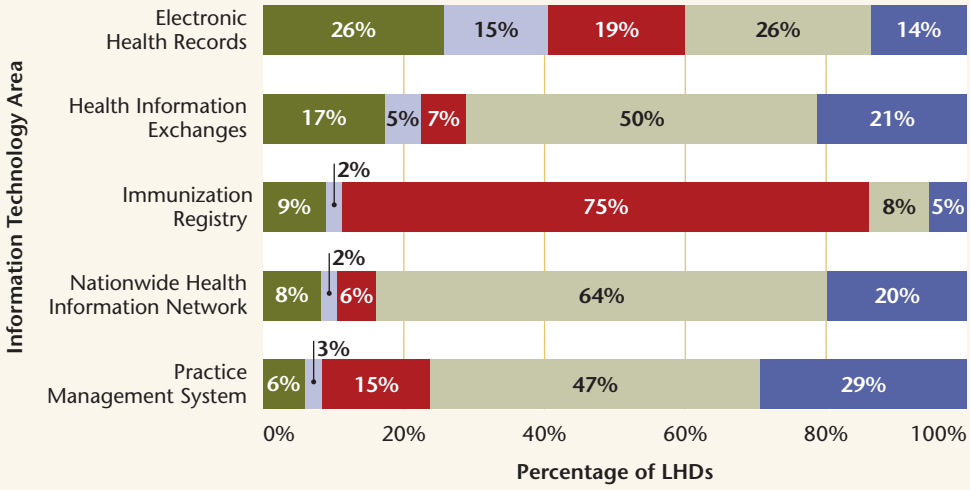
The 2010 Profile questionnaire included a set of questions regarding LHD use of selected information systems, syndromic surveillance systems, and Web 2.0 technologies. These questions were placed in a module added to the questionnaire for a random sample of LHDs. Questions on public health informatics specialists in the LHD workforce were included in the core Profile questionnaire that was sent to all LHDs.

What Kinds of Information Systems Did LHDs Use?

In a 2010 module LHDs were asked to indicate which information systems they had implemented, planned to implement, or were investigating/have investigated.

As shown in Figure 10.1, use of an immunization registry was the information system most often implemented (75%), followed by electronic health records (19%), and practice management systems (15%). Electronic health records were the technology most likely to be reported as planning to implement (15%) and to be investigating or have investigated (26%).

FIGURE 10.1 | Percentage Distribution of LHDs with Specific Level of Implementation, by Information Technology Area



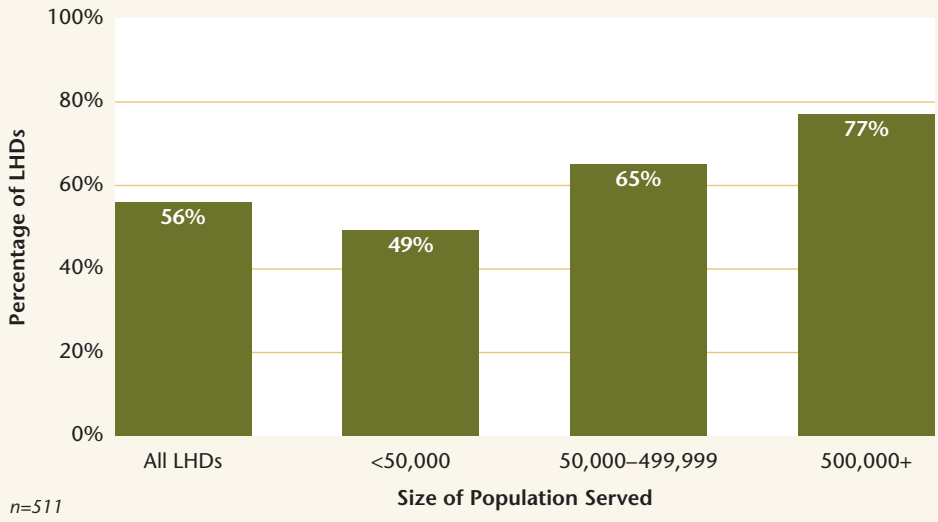
n=484

Note: Due to rounding, percentages do not add to 100%.

Did LHDs Use Electronic Surveillance Systems?

More than half of all LHDs (56%) reported using an electronic syndromic surveillance system (Figure 10.2), when asked to indicate LHD use of an electronic syndromic surveillance system, regardless of whether the LHD or another entity had developed it. LHDs serving jurisdictions with larger populations (77%) were more likely to use such an electronic syndromic surveillance system than were LHDs serving jurisdictions with smaller populations (49%).

FIGURE 10.2 | Percentage of LHDs That Use Electronic Syndromic Surveillance System, by Size of Population Served*



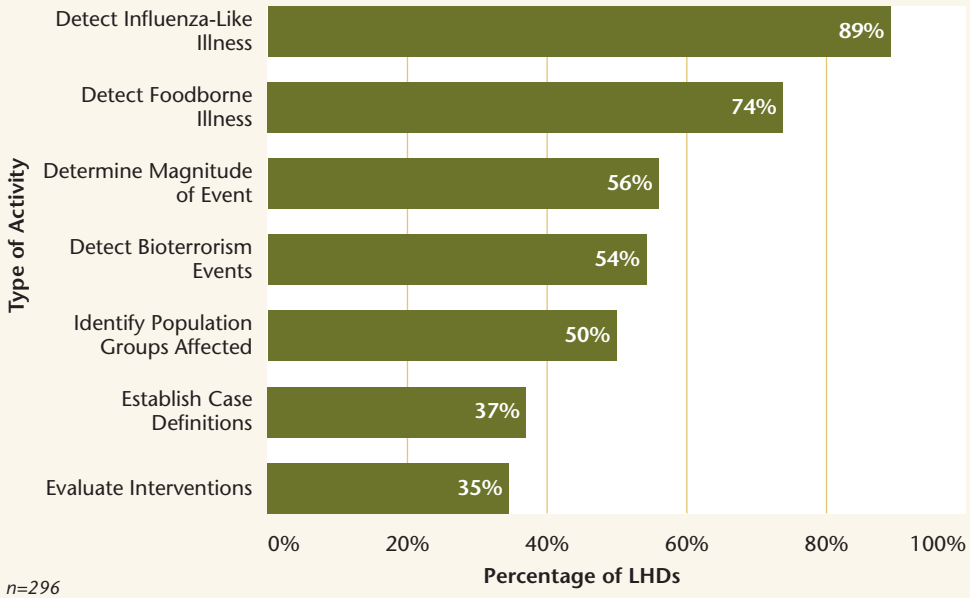
n=511

**Includes electronic syndromic surveillance system developed by LHD or another entity.*

For What Activities Did LHDs Use Electronic Syndromic Surveillance Systems?

Figure 10.3 shows which LHD activities used an electronic syndromic surveillance system. Three-quarters of LHDs reported that they used an electronic syndromic surveillance system to detect influenza-like illness (89%) and detect foodborne illness (74%). More than half of LHDs used an electronic surveillance system to determine magnitude of event (56%) and detect bioterrorism events (54%).

FIGURE 10.3 | Percentage of LHDs That Use Electronic Syndromic Surveillance System for Select Activities*



n=296

**LHDs that do not use syndromic surveillance system were excluded from this analysis.*

Which of the Web 2.0 Technologies Are Used by LHDs?

About one-third of LHDs used any of the listed Web 2.0 technologies (Figure 10.4). Facebook was the Web 2.0 technology used most often by LHDs (28%), followed by Twitter with about 13 percent of LHDs reporting using it. Use of all other technologies was reported much less frequently. LHDs serving jurisdictions with larger populations were much more likely to use Web 2.0 technologies than LHDs serving jurisdictions with smaller populations (Figure 10.5).

FIGURE 10.4 | Percentage of LHDs That Use Select Web 2.0 Technologies

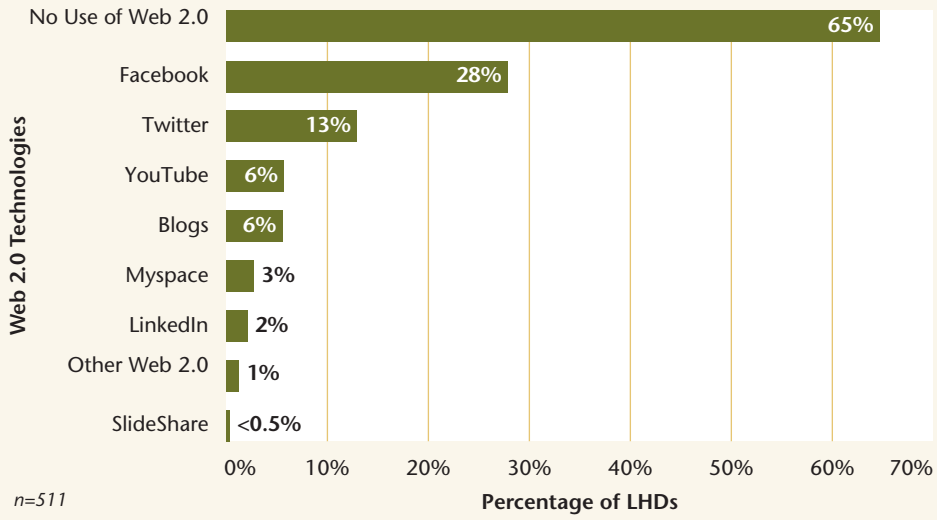
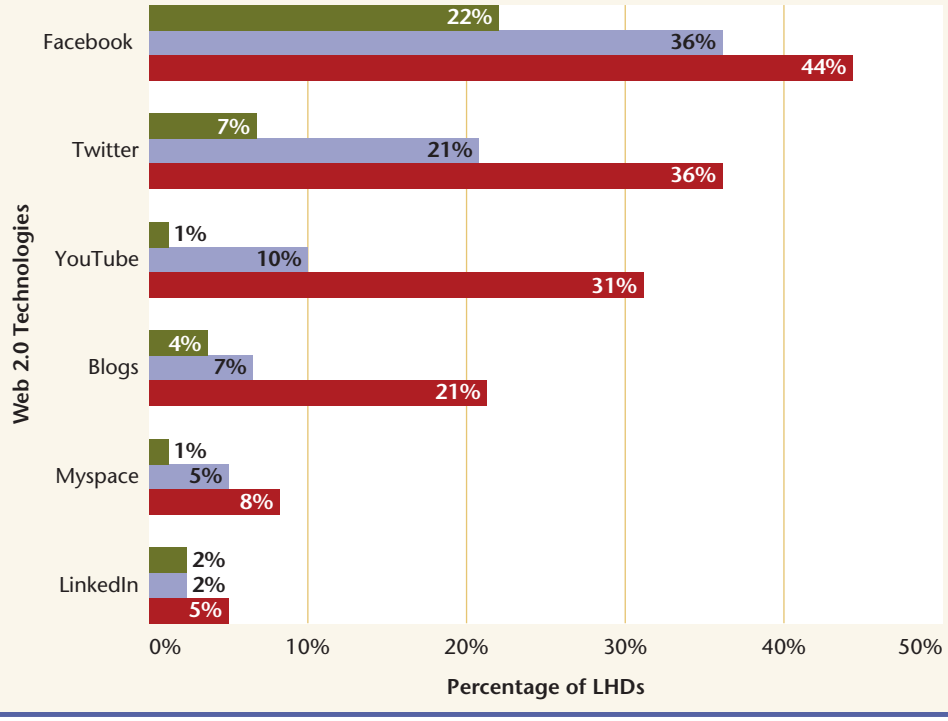


FIGURE 10.5 | Percentage of LHDs That Make Use of Web 2.0 Technologies, by Type of Technology Used and Size of Population Served



What Percentage of LHDs Have Public Health Informatics Specialists?

The workforce section of the Profile questionnaire asked LHDs whether they employed public health informatics specialist staff as a part of their public health workforce. Figure 10.6 shows the percentage of LHDs that had public health informatics specialists, by size of population served. Thirteen percent of LHDs had at least one public health informatics specialist. LHDs serving jurisdictions with larger populations (54%) were much more likely to have at least one public health informatics specialist than were LHDs serving smaller jurisdictions (3%).

FIGURE 10.6 | Percentage of LHDs That Have Public Health Informatics Specialists, by Size of Population Served

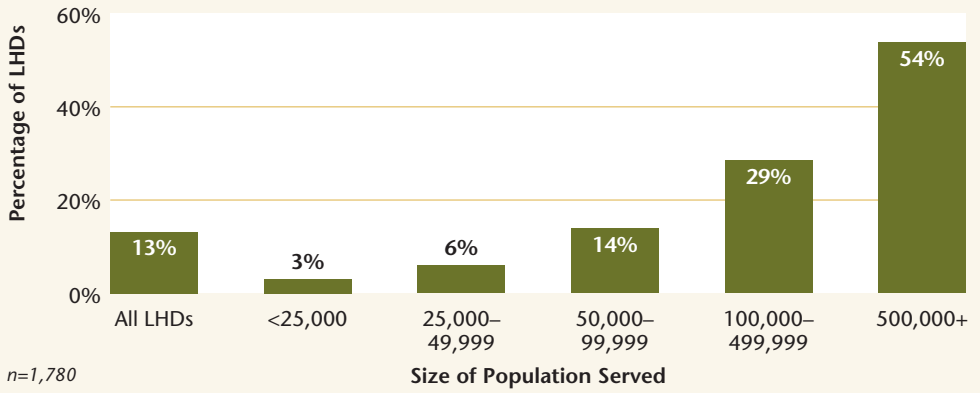
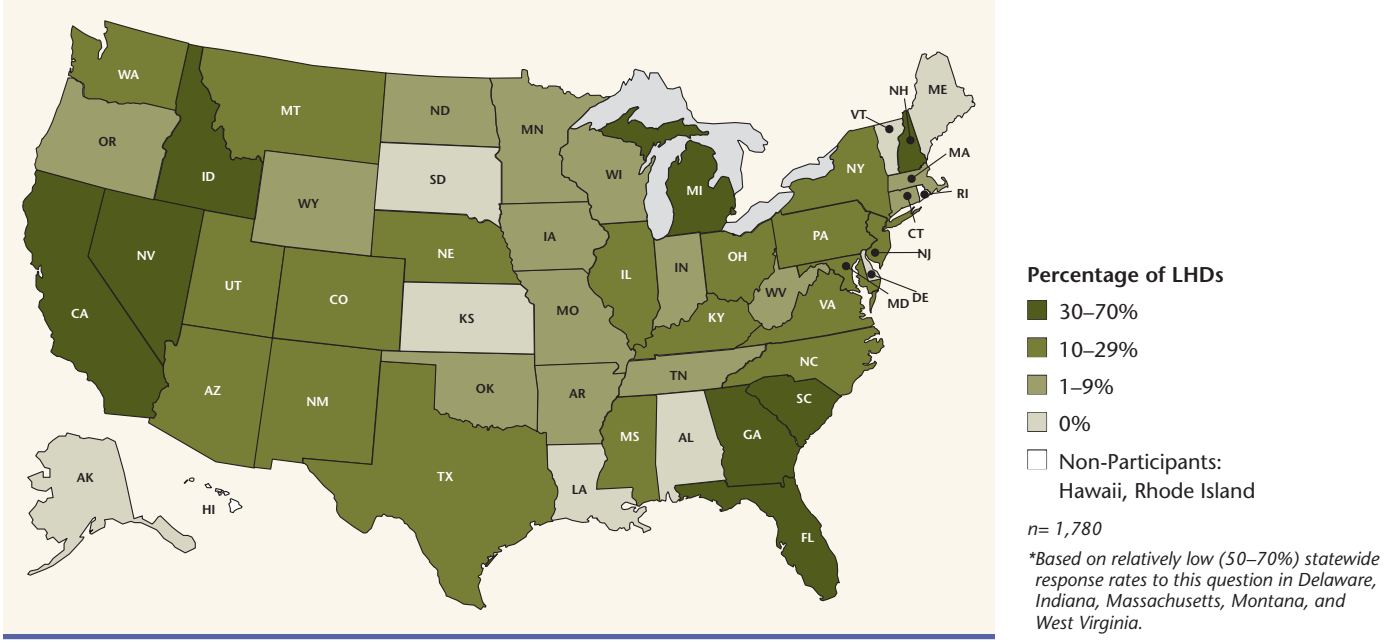


Figure 10.7 shows the percent of LHDs in each state that reported having a public health informatics specialist. Georgia had the highest percent of LHDs with public health informatics specialists (68%), closely followed by Florida (57%).

FIGURE 10.7 | Percentage of LHDs That Have Public Health Informatics Specialists, by State (Map)*

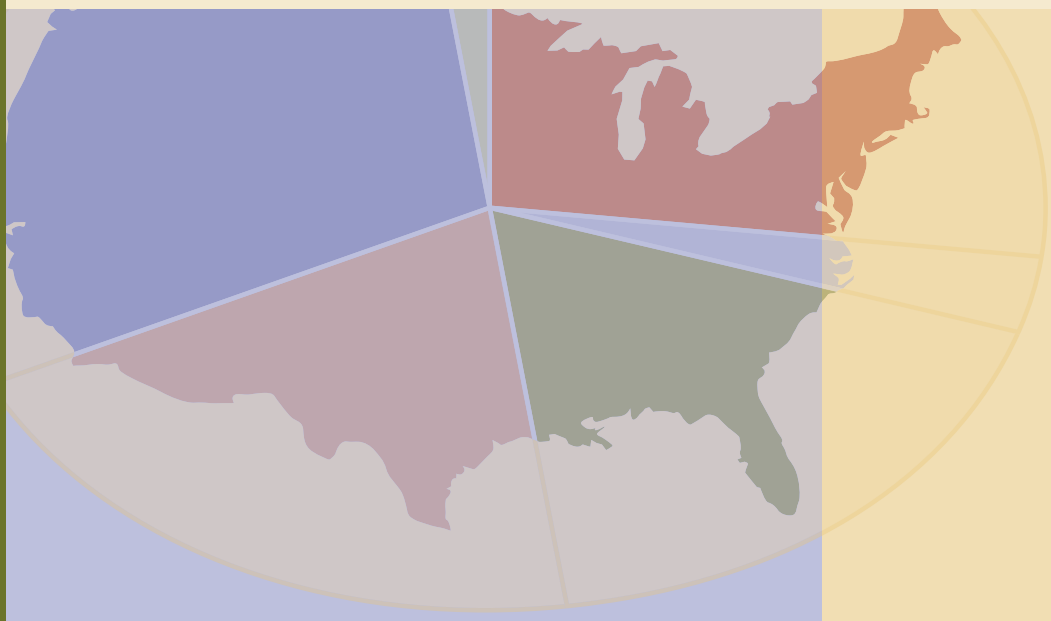


Based on relatively low (50–70%) statewide response rates to this question in Delaware, Indiana, Massachusetts, Montana, and West Virginia.

CHAPTER 11

Discussion

- Accreditation
- Quality Improvement
- Reductions in LHD Staffing
- Aging of the LHD Workforce
- Capacity Challenges for LHDs Serving Small Populations
- Access to Healthcare Services
- Emergency Preparedness
- Data Limitations
- Future of the Profile Study



The Profile study is, by design, a descriptive study that collects fairly high-level information on numerous topics. This design makes it difficult to identify the key conclusions of a particular wave of the Profile study. Instead, this chapter uses data from the Profile studies to shed light on many issues at the forefront of local public health practice today:

- Accreditation
- Quality improvement
- Reductions in LHD staffing
- Aging of the LHD workforce
- Capacity challenges for LHDs serving small populations
- Access to healthcare services
- Emergency preparedness

In addition, this chapter discusses issues related to the quality of data provided by LHD staff in the Profile survey and the future of the Profile study.

Accreditation

The Public Health Accreditation Board (PHAB) was incorporated in 2007 as the national accrediting body for state, local, tribal, and territorial public health agencies. The voluntary accreditation process and standards were piloted in 2009, and the national program is scheduled to launch in September 2011.

Responses to questions about intent to seek voluntary national accreditation suggest a high level of interest among LHDs in the national accreditation program. Sixteen percent of respondents strongly agreed and 34 percent agreed that their LHD would seek national accreditation. Using these data to extrapolate for all LHDs gives an estimate of 1,100 to 1,300 LHDs that are interested in seeking national accreditation. Furthermore, 8 percent of LHDs strongly agreed and 21 percent agreed that their LHD would seek national accreditation within the first two years of the program; this extrapolates to 650 to 750 LHDs. The same question was asked of LHDs in the 2008 Profile study. Percentages of LHDs reporting interest in seeking accreditation (time not specified) were similar at both times; the percentage of LHDs reporting interest in seeking accreditation in the first two years of the program was lower in 2010 than in 2008.

PHAB has established pre-requisites for LHDs that wish to apply for national accreditation, including completing a community health assessment (CHA), community health improvement plan (CHIP), and agency-wide strategic plan within the past five years. Data from the 2010 Profile study suggest that only 20 percent of LHDs have met all three of these pre-requisites. A higher percentage (32%) of LHDs serving populations of 500,000 or more has met all three pre-requisites. Profile data show little difference in completion of the three pre-requisites based on interest in seeking accreditation. Twenty-one percent of LHDs that report interest in seeking accreditation (and 24% of LHDs that report interest in seeking accreditation in the first two years) have completed all three pre-requisites.

These findings suggest that although a relatively large number of LHDs are interested in seeking national accreditation, many of them have not completed all of the assessment and planning activities that are required for accreditation.

Although the "recent" time frame for the question lengthened (past five years in 2010; past three years in 2008), the percentages of LHDs reporting completing these processes recently stayed flat or declined slightly between 2008 and 2010. The percentage of LHDs reporting a recent CHA declined slightly (60% in 2010; 63% in 2008), and the percentage of LHDs reporting a recent CHIP effort remained essentially flat (50% in 2010; 49% in 2008). The percentage of LHDs reporting a recent comprehensive agency strategic plan also decreased slightly (30% in 2010; 36% in 2008).

These assessment and planning activities are time- and resource-intensive and require specific skill sets. Many LHDs, particularly those that have experienced funding and staff reductions, may be challenged to marshal the resources required to complete the accreditation pre-requisites. NACCHO assists LHDs interested in seeking accreditation by providing various resources[1] to support the accreditation process, including developing its pre-requisites.

Quality Improvement

Quality improvement (QI) has become increasingly visible in the public health arena during the past several years. From 2008 to 2011, the Robert Wood Johnson Foundation funded the *Multi-State Learning Collaborative: Lead States in Public Health Quality Improvement*[2] to bring state and local health departments together with other stakeholders to improve public health services and the health of their community by implementing QI practices. A special issue of the *Journal of Public Health Management and Practice* that focused on quality improvement was published in 2010[3] and included a consensus definition of quality improvement in public health. The Department of Health and Human Services published *Consensus Statement on Quality in the Public Health System*[4] in 2008 and *Priority Areas for Improvement of Quality in Public Health*[5] in 2010. PHAB's accreditation program for LHDs has a focus on continuous QI.

Beginning in 2005, questions have been included in modules of NACCHO's Profile questionnaire to measure LHD adoption of QI practices. In 2005, 70 percent of LHDs responded affirmatively when asked whether their LHD had undertaken any quality or performance improvement efforts in the past three years. In 2008, 55 percent of LHDs responded affirmatively when asked whether their LHD had undertaken any formal QI or performance improvement efforts in the past two years. In 2010, 45 percent of LHDs reported a formal QI program (either agency-wide or in specific areas) and 39 percent of LHDs characterized their QI efforts as informal or ad hoc.

Analysis of these data might suggest that many LHDs have discontinued QI efforts despite the increased emphasis within the public health field. An alternative interpretation of the data suggests that respondents are becoming more sophisticated in their understanding of what constitutes QI. Similarly, the questions about QI in the Profile study have evolved as understanding of QI in the public health context (and at NACCHO) has evolved. The 2005 Profile study did not include a definition for performance improvement or QI. The 2008 Profile study provided a definition for performance improvement[6] and also added the qualifier "formal" to the survey question. The 2010 Profile study

provided the following definition for QI: a *formal, systematic* approach (such as plan-do-check-act) applied to the processes underlying public health programs and services in order to achieve *measurable* improvements. Although the evolution of these questions improves the usefulness of the information obtained, it also makes assessment of trends over time very difficult.

Results from Profile questions regarding specifics of LHD QI programs suggest that even LHDs that report having formal QI programs may not meet the evolving definitions of QI for public health. Forty-four percent of LHDs with formal QI programs (and 81% of LHDs reporting informal QI) do not base their QI efforts on a specific framework. Almost half of LHDs that report formal QI programs did not use process mapping or identify root causes, two fundamental steps of QI. Only 25 percent of LHDs with formal QI programs had trained more than 25 percent of their staff in QI, and 74 percent of them reported three or fewer QI projects[7] during the past year. These findings confirm that QI is still in its infancy in most LHDs and suggest that institutionalizing QI practices in LHDs will require sustained effort and commitment. NACCHO has assembled an extensive collection of resources and tools for LHD staff who wish to learn more about how to use QI to improve the performance of their programs and agencies.[8]

Reductions in LHD Staffing

The Great Recession took a heavy toll on the budgets of many LHDs, resulting in job and program cuts. NACCHO has documented these effects through a series of economic surveillance surveys,[9] one of which was integrated into the 2010 Profile survey. Although the Great Recession officially ended in June 2009, half of LHDs reported in late 2010 that they expected a lower budget in their next fiscal year.[10] Based on responses to five waves of the economic surveillance survey, NACCHO estimated that a total of 29,000 LHD jobs were eliminated (either via layoff or attrition) between 2008 and 2010.[11] Comparing the estimates of total number of LHD employees from the 2008 and 2010 Profile studies suggests that the nationwide LHD workforce shrank by approximately 6,000 employees. Although these numbers may initially appear contradictory, they are actually measuring different things. NACCHO's economic surveillance surveys are designed to estimate the number of LHD positions eliminated; these surveys do not collect data on the number of positions added. The Profile study is designed to estimate *net* changes in the size of the LHD workforce, capturing both positions lost and added.

Even considering the difference in design, the estimated net decrease in the size of the LHD workforce was smaller than anticipated. An important caveat is the uncertainty in the estimates of total workforce size. As indicated in Figure 5.8, the 95 percent confidence intervals on the 2008 and 2010 estimates are very wide (+/- 25,000 to 30,000) and overlap with each other, indicating that NACCHO cannot be confident that the actual values for total LHD staff in these two years are different from each other.

To further investigate changes in LHD employment, NACCHO conducted a longitudinal analysis of data from the 2008 and 2010 Profile studies.[12] Data on total employees were available at both times for 1,775 LHDs. The longitudinal

analysis showed that 50 percent of LHDs reported a net decrease in total employees, whereas 36 percent reported a net increase. The 891 LHDs with net decreases had a total reduction of 17,400 employees. The 632 LHDs with net increases had a total increase of 8,260 employees. Adding these numbers together results in a net decrease of 9,100 employees for these 1,775 LHDs. The LHDs with both 2008 and 2010 data employed 75 percent of the LHD workforce in 2008. Assuming the LHDs for which we do not have matching data experienced similar employment trends results in estimates of 23,000 positions eliminated and 11,000 positions added for a net decrease of 12,000 positions.

Although estimates on the size of staff reductions differ between these two methods, it is clear that the period between 2008 and 2010 was a difficult one for many LHDs. In addition to reduced staff size, LHDs faced other workforce challenges. Increased workloads, wage freezes and reductions, increased health insurance premiums, reduced benefits, and restrictions on travel and training contribute to low morale in remaining employees and make private sector jobs more attractive.

Aging of the LHD Workforce

The aging of the U.S. workforce is well-documented. Between 1977 and 2007, employment of workers aged 65 and older increased 101 percent, compared to a much smaller increase of 59 percent for total employment (aged 16 and older). This trend will accelerate as baby boomers reach age 65, with a projected increase of 80 percent in the number of workers age 65 and older between 2006 and 2016.[13] The proportion of older workers is higher in the government sector than in the private sector. In 2006, 36 percent of local government employees were age 50 or older, compared with 24 percent of private sector employees in this age group.[14]

Data on the age distribution of the entire LHD workforce have not been collected in the Profile study. Because less than one-third of LHDs reported in 2008 that they had compiled data on worker age,[15] requesting this information would impose a great burden for many LHDs. But Profile studies have collected data on age of LHD top executives, and these data indicate that the age distribution is shifting upward. The median age of an LHD top executive increased from 52 years in 2005 to 54 years in 2010. Furthermore, the percentage of LHD top executives between ages 60 and 69 increased from 13 percent in 2005 to 21 percent in 2010. The percentage of LHD top executives younger than age 50 decreased over this period (37% in 2005 to 32% in 2010).

The shift to an older age distribution of LHD top executives means that a large wave of top executive retirements may take place in the future. Changes in leadership can present opportunities for positive change, but can be disruptive if individuals with appropriate skills and experience are not available to take on the newly vacated positions. Thoughtful succession planning and developing potential public health leaders are keys to ensuring qualified individuals are available to assume these leadership positions. Data from the 2008 Profile study show that more than 60 percent of LHD top executives reached their position through either an internal promotion (40%) or through positions at other

LHDs (22%).[16] This suggests that current LHD staff members, such as middle managers, are important targets for leadership development. In the current economic climate, funds to support LHD staff training are limited, and many employees have taken on additional responsibilities in response to staffing cuts. This scarcity in both time and money presents great challenges to workforce development at a critical time.

A wave of top executive retirements also has the potential to accelerate the trends of shared resources (i.e., one top executive serving multiple LHDs) and agency consolidation, especially in times of budget cuts. In several states where jurisdiction consolidation has occurred during the past decade (e.g., Connecticut, New Jersey, Ohio), retirement of the top executive has been cited as a factor that facilitated these "mergers." Sharing the costly resource of a top executive, via either shared services or agency consolidation, could be particularly beneficial for LHDs serving small populations.

Capacity Challenges for LHDs Serving Small Populations

One of the most notable characteristics of LHDs is their heterogeneity. The populations of the jurisdictions served by LHDs range from less than 1,000 to more than 10 million people, and this results in differences in many aspects of infrastructure and activities. The level of staffing varies from less than one FTE to more than 6,000 FTEs. Their total annual expenditures span five orders of magnitude. Although there is much diversity even among LHDs serving similarly sized populations, several trends related to size of population served are evident from the 2010 Profile findings.

- LHDs serving small populations have (on average) higher per capita expenditures and revenues and more FTEs per capita than those serving larger populations.
- LHDs serving small populations typically have a workforce that includes only a few occupations: managers, public health nurses, environmental health workers, and clerical staff. LHDs serving medium and large populations typically employ more diverse occupations, including emergency preparedness staff, health educators, nutritionists, public health physicians, and epidemiologists.
- LHDs serving small populations are more likely to have a top executive who is part-time, female, and has an RN license than LHDs serving large populations. LHDs serving large populations are more likely to have a top executive with a graduate degree than those serving small populations.
- LHDs serving small populations typically provide a narrower range of services compared with those serving large populations. LHDs serving populations less than 25,000 provided a median of 33 of the 87 services included in the Profile questionnaire; LHDs serving populations of 500,000 or more provided a median of 45 of these services.
- LHDs serving small populations are more likely to provide a few services than LHDs serving large populations, including home healthcare, school-based clinics, diabetes and high blood pressure screening, and several regulatory or licensing functions (cosmetology businesses, food and milk processing, housing, hotels/motels, and private drinking water).

- LHDs serving large populations (500,000+) are two to four times more likely than LHDs serving small populations (less than 25,000) to provide certain clinical healthcare services (substance abuse, behavioral/mental health, comprehensive primary care, HIV/AIDS treatment, oral health, obstetrical care), surveillance activities (injury, syndromic), population-based primary prevention programs (violence prevention, mental illness prevention), and other public health programs (emergency medical services, asthma prevention/management, veterinary public health, laboratory services, occupational safety and health, correctional health).
- LHDs serving large populations are more likely to report having completed CHAs, CHIPs, and strategic plans than those serving small populations.
- LHDs serving large populations are more likely to report formal QI programs than LHDs serving small populations.
- LHDs serving large populations are more likely to participate in advocacy and policymaking activities than those serving small populations.

A measure of heterogeneity among LHDs is likely to always exist because LHDs must meet the unique needs of the population they serve. However, all LHDs should meet PHAB's standards[17] because they reflect what everyone, regardless of where they live, has the right to expect from the local governmental public health presence (as outlined in NACCHO's *Operational Definition of a Functional Local Health Department*[18]). PHAB also acknowledges that there are various ways that LHDs can meet the standards and thus assure that all responsibilities and functions are being fulfilled (e.g., with assistance from the state, another LHD(s), or other government agency or community organization).

Increased focus on standards for LHDs has centered attention on the challenges of providing public health services on a very small scale. Previous research on the effects of public health system characteristics on the performance of the essential public health services found that the size of the population served was the strongest predictor of performance for most public health services, suggesting that public health systems can realize economies of scale.[19] States and communities have taken various approaches to addressing this challenge. Many states, especially those with centralized public health systems, establish district or regional offices that provide certain functions or services (e.g., emergency preparedness, epidemiology, health assessment and planning, workforce development) throughout a multi-county region. This approach is particularly common in areas with low population density or geographically small counties. Some decentralized states (e.g., Connecticut, Missouri, Utah) offer financial incentives to encourage consolidating LHD jurisdictions that serve small populations.[20] Other states (e.g., Nebraska, Minnesota) establish minimum population requirements for LHDs that result in multi-county LHDs in sparsely populated areas. Further research is needed to determine the extent to which these models strengthen public health capacity in small communities and areas with low population density.

Access to Healthcare Services

The Patient Protection and Affordable Care Act (ACA) of 2010 has reinvigorated the healthcare delivery and policy focus on prevention and health promotion rather than sick-care.[21] This development can be expected to further LHDs' existing interest in disease prevention through improved access to primary care in their communities. By assuring timely and affordable access to primary care, LHDs can play a major role in preventing unnecessary suffering, death, and hospitalization costs.

In the 1990s, when healthcare reform efforts were not very fruitful, the work of some researchers, such as Billings and Weissman, among others, was successful in drawing the attention of the healthcare community to ambulatory care sensitive (ACS) conditions by highlighting the connection between access to primary care and prevention of severe illness.[22,23,24] Many common ACS conditions—for example, asthma, diabetes, perforated/bleeding ulcer, congestive heart failure, and cellulitis—result from delay or failure to receive timely, effective, and affordable outpatient care, and thus cause avoidable hospital admissions and increased healthcare costs. Higher rates of admission for these conditions in an area or among a population subgroup can signal serious problems of access to and/or affordability of care. The centrality of prevention in ACA coupled with the connection between access to primary care and prevention signify the importance of and potential expansion in LHDs' role in assuring access to healthcare in their jurisdictions.

The Profile study results show that although LHDs are already involved in promoting access to care, their role can be expanded. During the 12 months prior to the survey, most LHDs actively promoted access to medical, dental, and behavioral healthcare services within their jurisdictions. Nearly two-thirds were involved in assessing gaps in access to one or more healthcare services. The same proportion implemented some strategies to increase accessibility of services. Two in three LHDs also implemented strategies to target the healthcare needs of underserved populations. Nearly half of the LHDs directly provided clinical care services to address the needs of underserved populations.

Improvement in public health capacity is one of the central canons of ACA. To instill and promote the culture of disease prevention, many initiatives will be funded and healthcare and public health infrastructures will be reinforced under the auspices of ACA. These initiatives will focus on removing barriers to accessing clinical preventative services and developing healthier communities. As a part of the health reform initiatives, the Department of Health and Human Services Secretary has allocated funding for research in public health services and systems to identify the best prevention practices. The CDC has already announced grants for state health departments, large LHDs, and community-based organizations to improve health in their communities.[25,26] LHDs should prepare to actively seize these opportunities, which are intended to promote the goals that are also central to their mission—creating healthier communities.

Emergency Preparedness

Nearly a decade ago, the terrorist attacks and the subsequent anthrax incidents and hoaxes played a crucial role in underscoring the importance of assessing and improving ways to address public health emergencies and overall preparedness in communities across United States. The grave effect of the Great East Japan Earthquake on March 11, 2011, came as a wakeup call for further assessing and building preparedness capacity in the United States. Although the Profile study is not intended to assess LHDs' public health preparedness, the Profile questionnaire includes some items on funding and staffing, which are two key elements of preparedness capacity.

The median amount of LHD revenue for preparedness activities (from all sources) reported in the 2010 Profile was $67,000 or $2 per capita. Comparing LHDs' overall funding with their preparedness funding levels indicates that funding for preparedness activities is still a small proportion of overall LHD funding. LHDs' revenue for preparedness activities comprised a median of 5 percent of their total revenue for the most recently completed fiscal year. Although modest, preparedness funding for 84 percent of LHDs had federal pass-through as one of the revenue sources. Fifty-nine percent of LHDs relied exclusively on federal funding to carry out their preparedness activities. Cuts in federal funding could significantly compromise the state of preparedness across the nation, which in turn may have a devastating effect when LHDs are called upon to respond to all-hazards events without having sufficient capacity to respond.

LHDs respond to many other events besides large scale disasters or pandemics (e.g., foodborne outbreaks and infectious disease outbreaks). However, unlike organizations that focus exclusively on emergency response (e.g., fire and emergency medical services), LHDs have few staff members whose primary responsibility is emergency preparedness and response. On average, LHDs have 0.5 FTE staff dedicated to emergency preparedness. The median increases with the size of the population within the jurisdiction, with a median of four FTE emergency preparedness staff for LHDs serving jurisdictions of 500,000 or more. LHDs rely on non-emergency preparedness staff and volunteers to respond to events. On average, LHDs used up to 70 percent of staff not otherwise dedicated to emergency preparedness when responding to the H1N1 influenza outbreak and 30 percent of staff when responding to a natural disaster. Consequently, the staff cuts experienced by many LHDs have reduced their capacity to respond to emergencies. Nearly all LHDs engage volunteers for emergency preparedness and response, most frequently from MRC units, CERTs, and the Red Cross. This finding confirms the importance of LHDs establishing relationships with such organizations in their local areas. LHDs engaged many volunteers when responding to all-hazards events. On average, 178 volunteers were registered with LHDs that engaged volunteers in preparedness activities. The median number of registered volunteers ranged from 278 per 100,000 people for LHDs serving jurisdictions with populations of less than 25,000 to 37 per 100,000 for LHDs serving jurisdictions with populations of 500,000 or more.

The importance of LHDs' role in responding to emergency events underscores the need for a robust preparedness and response plan and a trained workforce.

Proper training of volunteers and non-emergency preparedness staff is important to assure the quality of LHDs' response to emergencies.

Data Limitations

The Profile study is a comprehensive source of information on LHD finances, infrastructure, workforce, activities, and other important characteristics. Given that the study collects basic data on a large number of topics, the level of detail available in Profile data does not provide extensive information on all dimensions of these topics. The data available on LHD infrastructure and activities provide excellent descriptive information, which can trigger useful ideas and start valuable dialogue on potential research questions. But the Profile study alone does not provide sufficient data for certain hypotheses requiring more focused, in-depth research. For example, LHDs provide information about what services and activities they provide from a list of more than 80 activities/services, but do not provide information on the scope or scale of these services. Consequently, a study seeking to examine any change in service level will not be fully served by the Profile data because the questionnaire does not capture reductions in services unless the service is completely eliminated. For example, an LHD may reduce the scale of its well child services through more stringent income requirements, but this change is not captured by the Profile activity data. Similarly, an LHD may reduce the scope of its tobacco prevention and control program by eliminating certain activities, but this change is not captured by the Profile activity data unless the entire tobacco program is eliminated.

Reliability and validity of self-reported data can be questionable, although self-reporting is convenient and relatively inexpensive. The Profile study data were self-reported by LHDs and not independently verified. The costs associated with other methods for collecting data from such a large number of organizations are prohibitive. Therefore, the study findings should be viewed with the limitations of self-reported data in mind. LHDs may have provided incomplete, imperfect, or inconsistent information for various reasons.

Respondents may have interpreted certain questions differently. For example, the comparison of total revenue with revenue from different sources and with total expenditures revealed that some LHDs misunderstood the term "revenue" and therefore did not consider some funding sources as their revenues. Some LHDs considered as revenue only those funds generated through local sources, whereas others did not include contributions from local government in their total revenues.

Responding to the Profile questionnaire is fairly time intensive because it includes many questions. Consequently, respondents may have skipped some demanding questions because of time restrictions. Responses to some questions may have been based on estimation, particularly those requiring information to be retrieved from records. For example, 37 percent of all LHDs (and 67 percent of LHDs with state governance) indicated that some or all of the revenue or expenditure amounts provided in the financial section were based on estimates rather than actual financial records.

Even when records were accessible to respondents, information in those records was not necessarily kept in the same categories as those used in the Profile questionnaire. For example, 40 percent of LHDs reported difficulty distinguishing between state direct and federal pass-through revenue sources. Similar difficulty arose when responding to the question on the number of FTEs for specific occupational categories. Occupational categories included in the questionnaire did not always match the way jobs were classified by LHDs, which may have resulted in inaccurate enumeration in certain categories.

The Profile survey covers numerous topics, and respondents may not have been fully knowledgeable about all of them. Although the questionnaire is designed to minimize such errors by allowing multiple staff members to complete various sections at the same time and by providing "do not know" options for many questions, the frequency of such errors is not known.

The field of public health finance has received increased attention in recent years. Rigorous financial analysis can support decision-making at individual LHDs[27] and generate evidence about the relationship between funding for public health and public health performance or population health outcomes.[28] NACCHO's extensive quality control checks on the financial data provided in the Profile study suggest that many LHDs have inadequate financial information systems and some LHD leaders have insufficient financial literacy. The financial data collected via Profile are fairly basic: total revenues, total expenditures, and amount of revenue from various funding source categories. Yet, NACCHO obtained complete financial data for only 31 percent of respondents to the 2010 Profile study. The Profile does not collect more granular data on revenues and expenditures for specific programmatic areas (e.g., food safety, immunization, chronic disease prevention, etc.). Although program-level data would be highly useful for both research and policymaking, collecting these data nationally seems unrealistic given the difficulty of some LHDs in providing accurate data on total revenues and expenditures. Other researchers have noted the difficulty of collecting accurate financial data from public health agencies given the lack of standard definitions and measures, differences in budgeting and accounting practices, and incomplete administrative and fiscal recordkeeping.[29,30] Honore and Amy highlight the need for advancement in the field of public health finance and identify a number of key steps for practitioners, including developing methods and cultural norms for sharing financial information, developing financial performance indicators, and establishing state and national associations for public health finance.[31] NACCHO is partnering with the University of Southern Mississippi to develop a Web-based system that will facilitate financial analysis for LHDs by calculating financial ratios and trends, generating graphs and reports, and allowing benchmarking with peer LHDs. This system is expected to be available in late 2012.

Future of the Profile Study

It has been 22 years since NACCHO conducted the first National Profile of Local Health Departments study in 1989. The Profile study has "grown up" in many ways—it is now broader, more sophisticated, and recurs more often than in its early years. In 1989, a paper survey was mailed out through the U.S.

postal service and administered for approximately 10 months. In 2010, the survey was administered through a sophisticated Web-based system for a period of approximately three months. The 1989 Profile questionnaire was six pages long; the 2010 Profile study included a 23-page core questionnaire plus module questionnaires ranging from 9 to 12 pages. The report of the 1989 Profile study included 32 figures and was published 18 months after the survey launched. This report of the 2010 Profile study includes 99 figures and was published 11 months after the survey was launched.

The field of public health systems and services research (PHSSR) has also undergone tremendous growth during this time, largely as a result of support from the Robert Wood Johnson Foundation. A study by Merrill and colleagues found that the number of published articles per year in the field of PHSSR increased from approximately 50 in 1989 to almost 200 in 2009. NACCHO's Profile study has been an important resource for PHSSR. Data from the Profile study have been supplied to well over 100 researchers, resulting in scores of published articles and scientific presentations.

Where is the Profile study going in the future? The data harmonization process was a major step forward for the Profile. NACCHO worked collaboratively with the Association of State and Territorial Health Officials (ASTHO) and the National Association of Local Boards of Health (NALBOH) to coordinate timing, topics, definitions, and question wording for the 2010 round of surveys. All three organizations will supply data from their 2010 surveys to the Coordinating Center for Public Health Systems and Services Research at the University of Kentucky College of Public Health, where a linked data set will be developed. The linked data set will facilitate research that examines the public health system at multiple levels and will allow for a holistic understanding of the current state of public health capacity and activities. NACCHO, ASTHO, and NALBOH will assess the performance of the harmonized questionnaires and work to improve the usefulness of the data collected through these surveys.

Conducting the Profile study regularly is also an important step forward. The Profile study was conducted sporadically during the late 1980s and 1990s, and there was a gap of nearly nine years between the 1996 and 2005 Profile studies. NACCHO hopes to secure funding to enable administration of the Profile study on a regular two-year cycle, which will help LHD leaders to plan for the staff time needed to complete the questionnaire and researchers to plan for studies using the Profile data.

NACCHO also hopes to increase the utility of the data collected in Profile by developing additional types of products based on Profile data. In addition to this main report of the findings, NACCHO hopes to develop short fact sheets on selected topics and a user-friendly Web-based data query system that will allow users to generate their own summary statistics using Profile data.

One thing that has not changed over the decades is the tremendous support the Profile study has received from LHD leaders and staff. This is demonstrated by the excellent response rates (typically 80% or higher) that NACCHO continues to achieve for the Profile survey. The support NACCHO receives from state

associations of LHDs and state health agencies has also remained strong. How can NACCHO make the Profile study more useful to you? Send a message to profileteam@naccho.org, and a Profile team member will follow up with you to discuss your suggestions.

Notes

1 NACCHO. Accreditation Preparation Webpage. Available at http://www.naccho.org/topics/infrastructure/accreditation/preparing.cfm.

2 National Network of Public Health Institutes. *Multi-state learning collaborative: Lead states in public health quality improvement*. Available at http://www.nnphi.org/programs/mlc.

3 Novick, L. F. (Ed.). (2010). Quality improvement in public health [Special edition]. *Journal of Public Health Management and Practice 16* (1).

4 U.S. Department of Health and Human Services. (August 2008). *Consensus statement on quality in the public health system*. Available at http://www.hhs.gov/ash/initiatives/quality/quality/phqf-consensus-statement.html.

5 U.S. Department of Health and Human Services. (June 2011).*What is public health quality?* Available at http://www.hhs.gov/ash/initiatives/quality/quality.

6 Performance Improvement (often referred to as quality improvement or performance management) is a deliberate, defined process that seeks to achieve measurable improvements in capacity programs, or services with the goal of affecting the health of the community.

7 Defined as "a systematic QI initiative that includes an aim statement; a work plan with tasks, responsibilities and timelines; intervention strategy(ies); and measures for tracking change."

8 NACCHO. Quality Improvement Webpage. Available at http://www.naccho.org/topics/infrastructure/accreditation/quality.cfm.

9 NACCHO. LHD Budget Cuts and Job Losses Webpage. Available at http://www.naccho.org/topics/infrastructure/lhdbudget/index.cfm.

10 NACCHO. (June 2011). *Local health department job losses and program cuts: Findings from January 2011 survey and 2010 National Profile Study*. Available at http://www.naccho.org/topics/infrastructure/lhdbudget/loader.cfm?csModule=security/getfile&PageID=198106.

11 Ibid.

12 NACCHO. (July 2011). *Changes in size of local health department workforce: Longitudinal analysis of 2008 and 2010 Profile data*. Available at http://www.naccho.org/topics/infrastructure/profile/resources/loader.cfm?csModule=security/getfile&PageID=205584.

13 U.S. Department of Labor, Bureau of Labor Statistics. (July 2008). *Older workers*. Available at http://www.bls.gov/spotlight/2008/older_workers/.

14 Center for State and Local Government Excellence. (July 2007). *Public Sector Employment: The Current Situation*. Available at http://www.slge.org/vertical/Sites/%7BA260E1DF-5AEE-459D-84C4-876EFE1E4032%7D/uploads/%7BB4579F88-660D-49DD-8D52-F6928BD43C46%7D.PDF.

15 NACCHO. (May 2010). *The local health department workforce: Findings from the 2008 National Profile of Local Health Departments*. Available at http://www.naccho.org/topics/infrastructure/profile/upload/NACCHO_WorkforceReport_FINAL.pdf.

16 Ibid.

17 Public Health Accreditation Board. *PHAB standards and measures version 1.0*. Available at http://dl.dropbox.com/u/12758866/PHAB%20Standards%20and%20Measures%20Version%201.0.pdf.

18 NACCHO. *Operational Definition of a Functional Local Health Department*. Available at http://eweb.naccho.org/prd/?na101pdf.

19 Mays, G. P., McHugh, M. C., Shim, K., Perry, N., Lenaway, D., Halverson, P. K., and Moonesinghe, R. (March 2006). Institutional and economic determinants of public health system performance. *American Journal of Public Health 96* (3): 523–31.

20 Bernet, P. M. (2007). *Public Health Regionalizaion Study National Overview*. Available at http://www.naccho.org/topics/infrastructure/regionalization/resources/upload/Bernet-National-Overview-Study.pdf.

21 The Democratic Policy Committee. *The patient protection and affordable care act: Detailed summary*. Available at http://dpc.senate.gov/healthreformbill/healthbill04.pdf.

22 Billings, J., Zeitel, L., Lukomnik, J., Carey, T. S., Blank, A. E., and Newman, L. (1993). Impact of socioeconomic status on hospital use in New York City. *Health Affairs 12*: 162–73.

23 Billings, J., Anderson, G. M., Newman, L. S. (1996). Recent Findings on Preventable Hospitalizations. *Health Affairs 15* (3): 239–49.

24 Weissman, J. S., Gatsonis, C., Epstein, A. M. (1992). Rates of avoidable hospitalization by insurance status in Massachusetts and Maryland. *JAMA 268* (17): 2388–94.

25 The Democratic Policy Committee (DPC). The Patient Protection and Affordable Care Act: Detailed Summary. Available at http://dpc.senate.gov/healthreformbill/healthbill04.pdf.

26 U.S. Department of Health and Human Services. (May 13, 2011). *$100 million in affordable care act grants to help create healthier U.S. Communities: Prevention grants to focus on improving health, which can lower costs*. Available at http://www.hhs.gov/news/press/2011pres/05/20110513b.html.

27 Honore, P.A., Fos, P. F., Smith, T., Riley, M., and Kramarz, K. (2010). Decision science: A Scientific approach to enhance public health budgeting. *Journal of Public Health Management Practice 16* (2): 98–103.

28 Mays, G., and Smith, S. (2009). Geographic variation in public health spending: Correlates and consequences. *Health Services Research 44* (5 part 2): 1796–1817.

29 Sensenig, A. L. (2007). Refining estimates of public health spending as measured in national health expenditure accounts: The United States experience. *Journal of Public Health Management Practice 13* (2): 103–14.

30 Hebert, K., Henderson, N., and Gursky, E. (2007). Building preparedness by improving fiscal accountability. *Journal of Public Health Management Practice 13* (2): 200–01.

31 Honore, P. A., Amy, B. (2007). Public health finance: Fundamental theories, concepts, and definitions. *Journal of Public Health Management Practice 13* (2): 89–92.

NACCHO

National Association of County & City Health Officials

The National Connection for Local Public Health

1100 17th Street, NW
7th Floor
Washington, DC 20036
P 202-783-5550
F 202-783-1583
http://www.naccho.org